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Hillview had the reservoirs inspected in 2017. The inspection report for the two reservoirs is not on file with the Division.

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By August 31, 2019, Hillview must submit the most recent inspection reports for the reservoirs.

A2207001

Water Mains

The distribution system consists of six-inch diameter mains with ¾-inch and 1-inch diameter service laterals. The system piping is comprised of about 70 percent PVC piping and 30 percent asbestos-cement. There are 11 dead-ends in the system which are flushed on a semi-annual basis.

Because the system contains asbestos-cement pipe, a review of the source waters aggressive indices was conducted. The most recent source results for aggressive index was reviewed and the average of the wells was 11.375. By definition, this value is considered moderately aggressive (results less than 10 are very aggressive and results over 12 are not considered aggressive). Given the index and asbestos-cement pipe in the distribution system, a distribution code has been established to document and retain historical information on asbestos levels in the distribution system and is noted in the table below. Please sample from this location and have your lab use this source code so the results can now be stored in the States database for future reference and use.

PSCode	Asbestos monitoring site
2010014-901	ASB – GRIFFIN & GOLDSIDE

The last monitoring event was completed in August 2017 with a result of non-detect. The next round of monitoring is due in 2026.

Booster Pump Stations

Hillview Water Company has a total of three booster pump stations. One booster pump station is located within the Goldside subdivision area of the water system. The station consists of a four 119-gallon hydropneumatic pressure tanks and booster pump. No flow meter is present. The pressure settings are 55 psi (on) and 75 psi (off). The booster pump is activated by the distribution systems pressure.

The second booster pump station is located at the outlet of the Goldside Forebay. This is a 15-hp pump that boosts water to the distribution system and the Goldside Forebay, depending on water system demands.

The third booster pump station is located at the outlet of the Hillview Reservoir. This 10-hp pump provides water to the Goldside Forebay and/or the distribution system, depending on the systems demand.

Valve Exercising Program

An approved Valve Exercise Plan is on file dated November 16, 2016. The Plan outlines the objectives and procedures for the plan. One of the procedures is to record the pertinent

information of the valve. Hillview should continue to collect this information so that it can prioritize the valves that need to be exercised and eventually replaced. It is recommended that the Valve Exercise Plan be revised to include the locations of each valve.

By August 31, 2019, Hillview should submit a revised Valve Exercise Plan that outlines the location of each of the valves.

Fire Protection and Flushing Program

The 2016 inspection report stated that Goldside had 40 fire hydrants available for fire protection. This information is not currently being requested through the electronic Annual Reports to the Drinking Water Program (eAR). Hillview previously conducted flushing of the hydrants on a semi-annual basis. However, due to the previous drought, this practice was minimized to reduce water loss that was not being consumed. During years where there is no longer a drought, flushing is recommended at least once annually.

System Repairs

Typical repair of the Goldside water mains are done by isolating the water main and localizing the area of repair to minimize customers without water. The service area has many service lateral breaks on a regular basis. If possible, repairs of these breaks are done under pressure with “full circle” clamps, rather than depressurizing the main to repair or replace the pipe. Hillview personnel follow AWWA standards when any repairs are made. If a main is taken out of service (where pressure drops below 5 psi), special bacteriological samples are required to be collected and the results must be coliform free prior to the main being placed back into service. The 2018 eAR listed a total of eight water outages where the repairs for a water leak were addressed.

2.6 OPERATION AND MAINTENANCE

Goldside is a community water system which is classified by the Division's operator certification requirements as a D1 system. This means that the system is required to have a chief distribution system operator with at least a D1 certification. The Company's designated chief operator is Roger Forrester (D3) and five shift operators have been identified in the 2018 eAR (James Foster D2; Richard Ayala D2; Justin Demeusy D2; Steven Gerszewski, D3; and Jon Miller, D2). Therefore, the system meets the Division's operator certification requirements. In addition to the operators, Ralph Fairfield works as the Compliance Officer for the system.

Complaint Program

Water quality complaints are received through Hillview's office staff and assigned to the appropriate party. In 2018, there was a total of 57 complaints. 42 of them were on the color of the water, one for turbidity, two complaints were on either high- or low-pressure concerns, four required a replacement of the meter, and eight were about water outages. All complaints are logged by Hillview staff and addressed so that corrective actions are taken immediately.

2.7 CROSS-CONNECTION CONTROL PROGRAM

Hillview has an internal cross-connection control program in place. The Division recommends that a cross-connection control survey be conducted at least once every 5 years. A cross-connection control survey was performed by Michael McKeever on November 17, 2016. The report was submitted to the Division and Hillview has corrected the issues that were outlined.

Goldside tested the four backflow devices identified in the water system on an annual basis as identified in the eAR. This is a regulatory requirement of water systems that requires annual testing of backflow devices, keeping records of the annual testing and maintaining records of where the backflow devices are located.

2.8 ELECTRONIC ANNUAL REPORT AND COMPLAINT PROGRAM

All public water systems are required to provide updated water system information to the Division annually. The technical information included in the report is required per Section 116530 of the California Health and Safety Code. The 2018 Electronic Annual Report (EAR) to the Division of Drinking Water was submitted to Division on April 22, 2019.

Hillview needs to continue to keep records on all water quality complaints received, actions taken to correct the problem related to the complaint and periodic maintenance performed. These records should be made available for review by the Division during routine inspections, if requested, and reported annually on the Electronic Annual Report.

2.9 EMERGENCY RESPONSE AND NOTIFICATION PLAN

Water Quality Emergency Notification Plan

Hillview has an Emergency Notification Plan on file for the Goldside system with the Division dated June 6, 2019. The Plan lists Roger Forrester, Jim Foster, and Jon Miller as the primary, secondary, and tertiary contacts for the water system in the event of an emergency. The Plan specifies the use of television, radio, handbill and telephone as the forms of notification in the event of an emergency. The Plan addresses the notification methods and the amount of time necessary (approximately half an hour) to provide notification to the Goldside customers in the event of a water emergency.

2.10 CONSUMER CONFIDENCE REPORT (CCR)

Hillview is required to distribute a CCR to each customer in their service area by July 1st of each year. A copy of the CCR and the certification letter must be submitted to the Division by October 1st of each year. The Division has received the CCR for the District for the last six years. The 2017 CCR and certification form were received by the Division on June 6, 2018.

The 2018 CCR and certification form must be submitted to the Division prior to October 1, 2019.

2.11 SMALL WATER SYSTEM RESILIENCY AND PREPAREDNESS

The effects of extreme weather on community water system (CWS) facilities and operations is a concern and priority of the State Water Resources Control Board (SWRCB), which is documented by the SWRCB in its Comprehensive Climate Change Resolution adopted in March 2017. DDW is reviewing each water system's level of resiliency and preparedness for changing climate conditions and extreme weather event, increasing awareness and familiarization to the effects of climate change to facilities and operations, encouraging the use of EPA's Climate Resilience Evaluation and Awareness Tool (CREAT), and documenting the Water System's efforts related to current threats that may also provide mitigation to climate change impacts.

The SWRCB strongly encourages utilities to evaluate infrastructure and operational vulnerabilities to extreme weather and other emergency conditions using tools such as CREAT and engaging in a conversation both within your water system organization and with customers on how to plan and prepare for being resilient to provide clean and safe water reliably and adequately under all current and future conditions.

III. SOURCE WATER QUALITY MONITORING

3.1 Vulnerability Assessment of Sources

Source Water Assessments were completed in 2003 for the Goldside system with the exception of Goldside Well No. 7. A Source Water Assessment was completed for Goldside Well No. 7 in 2010. The sources are considered most vulnerable to the following activities associated with contaminants not detected in the water supply:

- Septic systems - low density [$<1/\text{acre}$]
- Sewer collection systems
- Historic gas stations
- Historic waste dumps/landfills
- Injection wells/dry wells/ sumps
- Known Contaminant Plumes
- Military installations
- Mining operations - Active
- Mining operations - Historic
- Underground Injection of Commercial/Industrial Discharges
- Underground storage tanks - Confirmed leaking tanks
- Wells - Water supply

This information is required to be reported each year in the Consumer Confidence Report (CCR) to each of the water system's customers.

3.2 Water Quality and Monitoring

Based on the Water Quality Monitoring Schedule, Goldside is required to test its active sources once every three years for general mineral, general physical and inorganic chemicals. The exception to this is nitrate, which must be monitored annually from the active sources. A summary of the last water quality analyses dates from the Goldside water system wells is provided below:

Table 3 – Last Source Water Quality Monitoring Dates

Well No.	GP/GM/IO	Nitrate	Rads	Perchlorate	VOCs	SOCs
GLSD 2	8/2017	3/2017*	6/2014	6/2017	3/2014	3/2014
GLSD 4	8/2017	6/2018*	10/2017	6/2018	9/2018	7/2018
GLSD 6	9/2018	9/2018	9/2018	9/2018	9/2018	7/2018
GLSD 7	9/2018	9/2018	3/2017	9/2017	7/2018	1/2019
HV 1	8/2017	6/2018*	10/2017	6/2018	9/2018	7/2018
RC 1	8/2017	6/2018*	7/2014	6/2018	9/2018	7/2018
RC 2	8/2017	6/2018*	10/2017	6/2018	9/2018	7/2018
MC 1 (S) ¹	5/2012	10/2018	7/2017	7/2017	5/2012	7/2014

*Past Due

¹ (S) - MC 1 is currently designated as a standby source.

General Mineral, General Physical and Inorganic Chemical Monitoring

With the exception of nitrate; general mineral, general physical and inorganic chemical monitoring is required to be completed once every three years for all active sources. All of the active wells are up-to-date in testing for the above-referenced constituents and in compliance with the primary maximum contaminant levels (MCLs). The last sample date for general mineral, general physical and inorganic monitoring for the Goldside system Wells Nos. 1, 3 and 4 are indicated in Table 3.

As a standby source, Miami Creek Well No. 1 is required to be monitored for water quality once every nine years. Based on the last sample date, Miami Creek Well No. 1 is current for monitoring based on the Standby Source monitoring schedule.

Iron and Manganese Monitoring

Goldside is required to meet all primary and secondary drinking water standards. Iron and manganese MCL's are under the secondary drinking water standards. A historical review of iron and manganese results dating back to 2010 revealed that some of the sources have exceeded the iron and/or manganese MCL's.

River Creek Well No. 2 produces water with iron levels above the MCL. Goldside Wells Nos. 6 and 7 produce water with iron and manganese above the MCLs. In a letter to Hillview dated August 15, 2012, the Division instructed them to initiate quarterly monitoring of these wells for the period of one year to determine the running annual average (RAA).

In summary, Goldside Wells Nos. 2, 6 and 7 and River Creek Well No. 2 have iron results that have historically exceeded three times the MCL at some time dating back to 2010. None of the active Goldside water sources have exceeded three times the MCL for manganese (Mn). River Creek Well No. 2 and Goldside Wells Nos. 6 and 7 have monitored quarterly and the current RAA's are 327, 587 and 225 µg/L respectively. Of these three wells, it is only Goldside Well No. 7 where the RAA is currently below three times the MCL. However, in the past, Goldside Well No. 7 has had some of the highest concentrations.

Goldside #4, #6 and #7 have exceeded the manganese MCL dating back to 2010. Goldside Well No. 4 has not conducted quarterly iron and manganese monitoring dating back to 2010,

but the other two sources do have quarterly results. The current manganese RAA's for Goldside Wells Nos. 6 and 7 are 47 and 75 µg/L respectively.

Although Miami Creek #1 is currently designated as a standby source due to elevated levels of uranium, this sources most recent iron result from 2012 was 280 µg/L. This exceeded the MCL, but no confirmation or quarterly monitoring results appear to have been collected to verify the levels in the source.

Sources that currently exceed three times the MCL for iron and/or manganese are not eligible for Hillview to conduct a survey and determine if customers want to pay for treatment or accept the current (secondary) water quality exceedances. Because some sources within the water system qualify for this exemption, but other sources in the water system do not, it presents a unique situation for Hillview.

Originally, Hillview was going to relocate and rehabilitate a filter from another water system that they operate to Goldside to provide treatment for the Goldside wells. The filtration system body has been placed within the Goldside system. However, it is proving exceedingly expensive to rehabilitate the filter and provide new media. Therefore at the time of this report, Hillview is investigating sequestration, using polyphosphates, as an option moving forward until the filter can be rehabilitated. If Hillview continues to move to using polyphosphates for sequestration, an Operations Plan for the use of the chemical must be submitted to the Division. In addition to the Operations Plan, Hillview must submit a Permit Amendment prior to the addition of the treatment.

Nitrate and Nitrite

All active wells must be monitored for nitrate at least once every 12 months and for nitrite at least once every 36 months, if the concentrations are less than one-half of their respective MCLs. The current MCL is 10 mg/L for nitrate (as Nitrogen) and 1000 µg/L for nitrite. Monitoring results show that levels of nitrate and nitrite detected are less than one-half of their respective MCLs for all active wells. Five of the wells are past due for nitrate monitoring. The last sampling dates for nitrate and nitrite monitoring are indicated in Table 3 above.

With the exception of Goldside Wells 06 and 07, the active wells were last monitored for nitrite in 2017, with all results of non-detect. The next round of nitrite monitoring for all of the active wells is due in 2020. Goldside Wells 06 and 07 were monitored in 2018, with non-detect results, and are next due for monitoring in 2021.

Arsenic

On January 23, 2006, the U.S. Environmental Protection Agency (USEPA) adopted a revised maximum contaminant level (MCL) for arsenic of 0.010 mg/L (milligrams per liter) or 10 ug/L (micrograms per liter). The Division also adopted the revised arsenic MCL of 0.010 mg/L on November 28, 2008. The Division's WQI database shows the last round of arsenic monitoring was completed in 2017 for all of the wells with the exception of the Goldside Well 06 and 07 which were monitored in 2018. All the results were below the MCL. The next round of monitoring for the Goldside Wells 06 and 07 is due in 2021. The other active wells are due for monitoring in 2020.

Perchlorate

The Division adopted a drinking water standard for perchlorate which became effective on October 18, 2007. The perchlorate drinking water standard applies to all community and nontransient-noncommunity water systems. The perchlorate MCL is 0.006 mg/L (6 ppb). All community and nontransient-noncommunity water systems were required to satisfy the initial monitoring requirements for perchlorate by October 18, 2008. Two samples were required collected and tested between October 18, 2007, and October 18, 2008. The sampling must be five to seven months apart, with one sample being taken between May 1 and September 30, 2008. Historical data gathered after January 3, 2001, may be used to meet the initial monitoring requirements. After the initial perchlorate monitoring, sampling frequency is reduced to once every three years if the results are non-detect.

A review of historical water quality analyses revealed that Goldside has completed the initial perchlorate monitoring for all the active and standby sources with results that meet the perchlorate standard (all ND). However, the results were not collected within the time frame noted above. All source sampling for perchlorate was collected in February and September 2009. The exception to this is the Goldside Well 7, which collected perchlorate samples in April 2010 and March 2014. These were well after the year allowed and outside the five month window for one of the two samples to be collected. The most recent perchlorate sampling dates for all sources is indicated in the Table 3 above.

The Last-Next Water Quality Monitoring Report can be found in Attachment B of this report and summarizes the last monitoring date and result while also showing when each constituent is due to be monitored.

Hexavalent Chromium

Effective July 1, 2014, the Division of Drinking Water adopted an MCL of 10 µg/L for hexavalent chromium (chromium VI) for community water systems. The regulation required all applicable public water systems to complete initial monitoring for chromium VI by December 31, 2014. Initial monitoring consists of a single sample for chromium VI collected from each active source. On May 31, 2017, the Superior Court of Sacramento County invalidated the MCL for hexavalent chromium, saying the state “failed to properly consider the economic feasibility of complying with the MCL.”

Goldside is unaffected by the ruling and is required to monitor for total chromium from both sources. The last round of monitoring for total chromium was completed 2017, for all fo the active wells except the Goldside Wells 06 and 07, with all results of non-detect. The next round of monitoring is due in 2021 the Goldside Wells 06 and 07, and 2020 for all the other active wells.

Volatile Organic Chemical (VOC) Monitoring

Hillview must monitor for volatile organic chemicals (VOCs) a minimum of once every three years. However, a waiver can be submitted and if approved, the monitor frequency can be changed to once every six years. The wells were last monitored according to Table 3 above.

Hillview submitted a VOC and SOC Monitoring Waiver Application for the wells in the Goldside water system. The waiver has been approved, which reduces the monitoring requirement for the sources to once every six years for VOCs. The groundwater sources are next due to be monitored for VOCs in 2020 for Goldside 2 and 2024 for the rest of the active wells.

The next round of monitoring for the wells are outlined in the Last-Next Water Quality Monitoring Report which can be found in Attachment B.

A waiver must be submitted to the Division for the sources before December 31, 2019, if Hillview wishes to remain on the six-year monitoring frequency.

Synthetic Organic Chemical (SOC) Monitoring

Hillview must monitor the raw water for synthetic organic chemicals (SOCs) a minimum of once every three years, after initial monitoring is completed. Initial monitoring consists one sample for all SOC constituents then all monitoring is waived except for atrazine and simazine. The initial SOC monitoring has been completed for the active wells, and the SOC monitoring frequencies are once every six years for the wells. The wells were last monitored for SOC according to Table 3 above. The results of the last round of simazine and atrazine monitoring for all of the wells was non-detect.

Hillview submitted a VOC and SOC Monitoring Waiver Application for the wells in the Goldside water system. The waiver has been approved, which reduces the monitoring requirement for the wells to once every six years.

The next round of monitoring for the wells are outlined in the Last-Next Water Quality Monitoring Report which can be found in Attachment B.

A waiver must be submitted to the Division for the sources before December 31, 2019, if Hillview wishes to keep the wells on the six-year monitoring frequency.

1,2,3-Trichloropropane (1,2,3-TCP)

1,2,3 – Trichloropropane was previously an unregulated synthetic organic chemical. 1,2,3-TCP is a chlorinated hydrocarbon with high chemical stability. It is a manmade chemical found at industrial or hazardous waste sites. It has been used as a cleaning and degreasing solvent and also is associated with pesticide products. In 1999, the Division established a 0.005 micrograms per liter (µg/L) drinking water notification level for 1,2,3-trichloropropane (1,2,3-TCP). This value is based on cancer risks derived from laboratory animal's studies (US EPA, 1997). The notification level is at the same concentration as the analytical reporting limit (0.005 ug/L). On July 18, 2017, the State Water Resources Control Board voted to adopt the proposed regulations with an MCL of 0.005 µg/L. Thus, beginning January 1, 2018, all community and nontransient-noncommunity water systems were required to being quarterly monitoring for one year for the presences of 1,2,3-TCP in groundwater and surface water sources.

Hillview completed the initial monitoring for all of the wells with the exception of the Goldside Well 02, with all results below the detection level. Goldside Well 02 has completed three

rounds of monitoring but the pump was pulled and the initial monitoring could not be completed. Once the well is online, Hillview should complete the initial monitoring by completing the last round of monitoring. The next round of 1,2,3-TCP monitoring is due in 2024 for the active wells with the exception of Goldside Well 02, which is described above.

Radiological Monitoring

The California Radionuclide Rule became effective on June 11, 2006. Initial monitoring requirements under the California Radionuclide Rule consist of four consecutive quarters of sampling. If the first two quarterly sample results are less than DLR, the final two quarters of sampling may be waived. If the gross alpha (GA) activity is more than 5 pCi/L, uranium must be analyzed. Analysis results for uranium may be used to obtain the total radium activity (Gross alpha - Uranium = Total Radium). If the GA activity is more than 15 pCi/L, analysis for uranium must be performed.

Goldside has satisfied all of the initial monitoring requirements of the California Radionuclide Rule. The last round of gross alpha monitoring is outlined in Table 3 above.

The next round of monitoring for each well is outlined in the Last-Next Water Quality Monitoring Report which can be found in Attachment B.

Bacteriological – Raw Water

Goldside is required to conduct monthly source monitoring because the water produced by the wells is continuously chlorinated. Hillview samples each of the active wells once a month. A review of the data since 2015 has revealed that Goldside Well 04 has been prone to sporadic total coliform bacteria positives. None of these positive total coliform events have had a positive E. coli or fecal coliform result. When total coliforms are detected, the source is taken offline and disinfected for a minimum of 24 hours. The well is then flushed to waste until no chlorine residual remains in the source water and a special bacteriological sample is collected. If the test result is negative, the well is requested to be placed back into service by Hillview pending the Division's approval of the request.

California Ground Water Rule

As per the requirements of the California Ground Water Rule (GWR), public water systems are required to conduct triggered source monitoring whenever a routine distribution system sample is positive for total coliform bacteria. Hillview has specified that each active well will be sampled for E.coli when a routine distribution system sample shows the presence of total coliform bacteria.

Distribution System Water Quality Monitoring

Bacteriological

Based on the number of service connections or the population served, routine bacteriological monitoring of the Goldside distribution system consists of collecting two routine samples per month. This also meets the criteria to collect a representative bacteriological sample from each pressure zone, as Goldside has two pressure zones. These sample results are reported as MPN/100mL for total coliform bacteria. Goldside's

Bacteriological Sample Siting Plan (BSSP), dated September 20, 2016, has been approved and is on file with the Division

To comply with the Groundwater Rule's triggered source monitoring, Hillview has selected to sample all active sources whenever total coliform bacteria is detected in the distribution system.

A review of the bacteriological data submitted since the last inspection in 2015 revealed that total coliform bacteria has not been detected in the distribution system.

Disinfection By-Products – ST2 DBPR Monitoring

Goldside is sampling annually from their previously approved sample location, the Goldside Reservoir (2010014-900, ST2DBP – Goldside Reservoir). The DBP total trihalomethanes (TTHM) and five haloacetic acids (HAA5) results are very low, but since the ST2DBP location is a storage facility, it may not truly be representative of a location with maximum water residence time. After reviewing sites with the Manager and him providing additional distribution system flows, the reservoir may still be the best location for DBP formation. Because the Goldside Reservoir (sampling location) floats on the distribution system, water has the potential for the longest residence time at this facility and the site will not be relocated.

PSCode	Asbestos monitoring site
2010014-900	ST2DBP – GOLDSIDE RESERVOIR

Historically, the Stage 2 DBP results have been very low. The last round of DBP monitoring was conducted in June 2018, with a result of 3.3 µg/L for TTHMs and non-detect for HAA5s. Goldside is due to collect another round of DBP samples for analysis.

Asbestos Monitoring – Distribution System

As mentioned in the Distribution System section, a portion of the piping for Goldside contains asbestos-cement (AC) pipe. The potential for asbestos fibers to be released from AC pipe due to dissolution of the cement binder is determined from the aggressive index (AI). The Division considers water with an aggressive index between 10 and 12 to be moderately aggressive and below 10 to be very aggressive. The average aggressive index from the active wells was 11.375.

Because of the moderately aggressive water and the lack of distribution system results, the Division is requiring Goldside to collect a distribution system asbestos sample once every nine years. Please reference and use the specific asbestos PS Code noted below when collecting future distribution system samples. The last round of asbestos monitoring was conducted in 2017 with a result of non-detect. The next round of monitoring is due in 2026.

PSCode	Stage 2 DBP Monitoring Location
2010014-901	ASB – GRIFFIN & GOLDSIDE

Lead and Copper Tap Monitoring

Twenty sites were required for the two six-month initial monitoring periods. The Goldside completed the initial monitoring and is now required to sample the reduced number of ten samples every three years. The last lead and copper monitoring was conducted in 2016, the 90th percentile results were 0.007 mg/L and 0.32 mg/L for lead and copper, respectively. These results are below the action levels, 0.015 mg/L and 1.3 mg/L. **The next round of lead and copper monitoring is due by September 30, 2019.** A summary of Goldside's historical Lead and Copper Monitoring can be found in Attachment E of this report.

The lead and copper tap monitoring must be conducted between the months of June 1st and September 30th. Future results should be submitted via the Lab-to-State portal. All participants should be notified of the results collected from their residents, and a special notice should be sent if the results are greater than the action level at the customer's home.

The Division recommends that Hillview provide the following information on the systems website or physically posting the information with other water quality notices, such as the CCR:

- The latest 90th percentile values for the most recent round of LCR tap sampling; and
- The number of sites sampled, the number of sites that exceeded an action level, and the number of samples that were invalidated (if applicable); and
- Justifications for invalidation of LCR samples (if applicable); and
- Information on the locations of lead service lines in the distribution system, together with a map of the identified areas and an inventory of lead plumbing in the system;
- Additional health information on how to minimize lead in drinking water if lead was detected above the action level in more than 5%, and up to and including 10%, of sites sampled. The health information language specified in Section 64482(c), Chapter 15, Title 22 of the Consumer Confidence Report regulations may be used for this purpose.

Lead Sampling in Schools

Assembly Bill 746 requires that public water systems that serve water to public or charter schools to conduct lead tap monitoring. Goldside does not provide water to any public or charter schools. Therefore, Goldside is not required to perform monitoring at schools.

Lead Service Line Inventory

As part of the 2017 EAR, Goldside was required to submit an inventory of the lead service lines within the distribution system. Hillview submitted the Lead Service Line Inventory Form and stated that there are 31 galvanized steel, 153 PVC, 20 HDPE, and 111 polybutylene service connections. Goldside completed the inventory for all of the service connections. Hillview included the inventory in the 2018 EAR as well.

IV. SYSTEM APPRAISAL

Goldside meets all primary drinking water standards and is in good condition. However, the water significantly exceeds the secondary standards for iron and manganese in some of the sources. Hillview should continue to move forward with treatment implementation for both iron and manganese at the wells that exceed the MCLs. The operations of the system are done professionally, and the staff is very knowledgeable about how the system operates. Hillview does a great job through well sounding of managing their water resources to ensure that the wells are not over pumped and are able to recharge.

Goldside needs to address the following issues that were observed during the inspection:

1. By August 31, 2019, Hillview must seal the sounding tube at Well No. 4. Photo documentation must be submitted to the Division to verify that it has been sealed.
2. By August 31, 2019, Hillview must submit the most current chlorination operations plan for the Goldside system to the Division for review and approval.
3. By August 31, 2019, Hillview must submit the most recent inspection reports for the reservoirs.
4. By August 31, 2019, Hillview should submit a revised Valve Exercise Plan that outlines the location of each of the valves and the frequency they will be exercised.
5. The next round of lead and copper monitoring is due by September 30, 2019.

Report Prepared By: Austin Ferreria
Water Resource Control Engineer

Attachment A: Inspection Photos – 12/12/2018
Attachment B: Last and Next Sample Dates
Attachment C: Source Bacteriological Monitoring Report
Attachment D: Distribution Bacteriological Monitoring Report
Attachment E: Lead and Copper Monitoring Summary

Attachment A
Inspection Photographs

Attachment A
Hillview Water Company—Goldside Water System—2010014
Photographs - 2018

Well #4—Active



Gap in Sounding Tube at Well #4



Storage Tank at Goldside Forebay

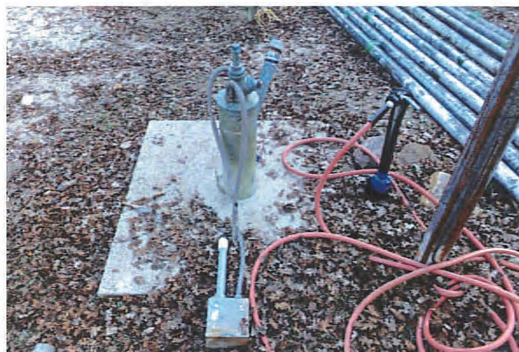


Filter System at Goldside Forebay



Attachment A
Hillview Water Company—Goldside Water System—2010014
Photographs - 2018

Well # 5-Active



Well # 6-Active



Well #7-Active



Attachment A
Hillview Water Company—Goldside Water System—2010014
Photographs - 2018

Hillview Well #1—Active



Miami Creek #1-Active



River Creek #1-Active



River Creek #2-Active



Attachment B
Last and Next Monitoring Schedule

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO: 002

NAME: GOLDSIDE WELL 02 - RAW

CLASS: CMGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION		LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - 002	HILLVIEW WATER CO-GOLDSIDE-HIL	002	GOLDSIDE WELL 02 - RAW									
	GP SECONDARY/GP											
	00440 BICARBONATE ALKALINITY		98 MG/L	-----	-----	2017/08/15	7	36			2020/08	
	00916 CALCIUM		20 MG/L	-----	-----	2017/08/15	7	36			2020/08	
	00445 CARBONATE ALKALINITY	<	ND MG/L	-----	-----	2017/08/15	7	36			2020/08	
	00940 CHLORIDE		24 MG/L	500	-----	2017/08/15	7	36			2020/08	
	00081 COLOR	<	ND UNITS	15	-----	2017/03/28	7	36			2020/03	
	01042 COPPER	<	ND UG/L	1000	50	2017/08/15	7	36			2020/08	
	38260 FOAMING AGENTS (MBAS)	<	ND MG/L	.5	-----	2017/08/15	7	36			2020/08	
	00900 HARDNESS (TOTAL) AS CaCO3		76 MG/L	-----	-----	2017/08/15	7	36			2020/08	
	71830 HYDROXIDE ALKALINITY	<	ND MG/L	-----	-----	2017/08/15	7	36			2020/08	
	01045 IRON	<	ND UG/L	300	100	2017/08/15	6	36			2020/08	
	00927 MAGNESIUM		6.1 MG/L	-----	-----	2017/08/15	7	36			2020/08	
	01055 MANGANESE	<	ND UG/L	50	20	2017/08/15	7	36			2020/08	
	00086 ODOR THRESHOLD @ 60 C	<	ND TON	3	1	2017/03/28	7	36			2020/03	
	00403 PH, LABORATORY		6.9	-----	-----	2017/08/15	8	36			2020/08	
	01077 SILVER	<	ND UG/L	100	10	2017/08/15	7	36			2020/08	
	00929 SODIUM		12 MG/L	-----	-----	2017/08/15	7	36			2020/08	
	00095 SPECIFIC CONDUCTANCE		360 US	1600	-----	2017/08/15	9	36			2020/08	
	00945 SULFATE		8.6 MG/L	500	.5	2017/08/15	7	36			2020/08	
	70300 TOTAL DISSOLVED SOLIDS		220 MG/L	1000	-----	2017/08/15	7	36			2020/08	
	82079 TURBIDITY, LABORATORY		0.34 NTU	5	.1	2017/03/28	7	36			2020/03	
	01092 ZINC	<	ND UG/L	5000	50	2017/08/15	7	36			2020/08	
	IO INORGANIC											
	01105 ALUMINUM	<	ND UG/L	1000	50	2017/03/28	6	36			2020/03	
	01097 ANTIMONY	<	ND UG/L	6	6	2017/03/28	5	36			2020/03	
	01002 ARSENIC	<	ND UG/L	10	2	2017/03/28	7	36			2020/03	

DATE: 7/31/2019

STATE OF CALIFORNIA

PAGE 2

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO:

NAME: GOLDSIDE WELL 02 - RAW

CLASS: CMGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - IO INORGANIC											
002	81855 ASBESTOS	<	.0000 MFL	7	.2	2014/03/10	2	108		2023/03	
	01007 BARIUM		190 UG/L	1000	100	2017/03/28	7	36		2020/03	
	01012 BERYLLIUM	<	ND UG/L	4	1	2017/03/28	5	36		2020/03	
	01027 CADMIUM	<	ND UG/L	5	1	2017/03/28	7	36		2020/03	
	01034 CHROMIUM (TOTAL)	<	ND UG/L	50	10	2017/03/28	7	36		2020/03	
	00951 FLUORIDE (F) (NATURAL-SOURCE)	<	ND MG/L	2	.1	2017/03/28	7	36		2020/03	
	71900 MERCURY	<	ND UG/L	2	1	2017/03/28	7	36		2020/03	
	01067 NICKEL	<	ND UG/L	100	10	2017/03/28	5	36		2020/03	
	A-031 PERCHLORATE	<	ND UG/L	6	4	2017/06/20	4	36		2020/06	
	01147 SELENIUM	<	ND UG/L	50	5	2017/03/28	7	36		2020/03	
	01059 THALLIUM	<	ND UG/L	2	1	2017/03/28	5	36		2020/03	
NI NITRATE/NITRITE											
	00618 NITRATE (AS N)		0.56 mg/L	10	.4	2017/03/28	15	12		2018/03	DUE NOW
	00620 NITRITE (AS N)	<	ND mg/L	1	.4	2017/03/28	6	36		2020/03	
RA RADIOLOGICAL											
	01501 GROSS ALPHA	<	.0000 PCI/L	15	3	2014/06/09	9	108	M	2023/06	
S1 REGULATED VOC											
	34506 1,1,1- TRICHLOROETHANE	<	.0000 UG/L	200	.5	2014/03/10	3	72		2020/03	
	34516 1,1,2,2- TETRACHLOROETHANE	<	.0000 UG/L	1	.5	2014/03/10	3	72		2020/03	
	34511 1,1,2- TRICHLOROETHANE	<	.0000 UG/L	5	.5	2014/03/10	3	72		2020/03	
	34496 1,1-DICHLOROETHANE	<	.0000 UG/L	5	.5	2014/03/10	3	72		2020/03	
	34501 1,1- DICHLOROETHYLENE	<	.0000 UG/L	6	.5	2014/03/10	3	72		2020/03	
	34551 1,2,4- TRICHLOROBENZENE	<	.0000 UG/L	5	.5	2014/03/10	3	72		2020/03	
	34536 1,2- DICHLOROBENZENE	<	.0000 UG/L	600	.5	2014/03/10	3	72		2020/03	
	34531 1,2-DICHLOROETHANE	<	.0000 UG/L	.5	.5	2014/03/10	3	72		2020/03	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO:

NAME: GOLDSIDE WELL 02 - RAW

CLASS: CMGD

STATUS: Active

PCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - S1 002	34541 1,2-DICHLOROPROPANE	<	.0000 UG/L	5	.5	2014/03/10	3	72		2020/03	
	34561 1,3-DICHLOROPROPENE (TOTAL)	<	.0000 UG/L	.5	.5	2014/03/10	3	72		2020/03	
	34571 1,4-DICHLOROBENZENE	<	.0000 UG/L	5	.5	2014/03/10	3	72		2020/03	
	34030 BENZENE	<	.0000 UG/L	1	.5	2014/03/10	3	72		2020/03	
	32102 CARBON TETRACHLORIDE	<	.0000 UG/L	.5	.5	2014/03/10	3	72		2020/03	
	77093 CIS-1,2-DICHLOROETHYLENE	<	.0000 UG/L	6	.5	2014/03/10	3	72		2020/03	
	34423 DICHLOROMETHANE	<	.0000 UG/L	5	.5	2014/03/10	3	72		2020/03	
	34371 ETHYL BENZENE	<	.0000 UG/L	300	.5	2014/03/10	3	72		2020/03	
	46491 METHYL-TERT-BUTYL-ETHER (MTBE)	<	.0000 UG/L	13	3	2014/03/10	4	72		2020/03	
	34301 MONOCHLOROBENZENE	<	.0000 UG/L	70	.5	2014/03/10	3	72		2020/03	
	77128 STYRENE	<	.0000 UG/L	100	.5	2014/03/10	3	72		2020/03	
	34475 TETRACHLOROETHYLENE	<	.0000 UG/L	5	.5	2014/03/10	3	72		2020/03	
	34010 TOLUENE	<	.0000 UG/L	150	.5	2014/03/10	3	72		2020/03	
	34546 TRANS-1,2-DICHLOROETHYLENE	<	.0000 UG/L	10	.5	2014/03/10	3	72		2020/03	
	39180 TRICHLOROETHYLENE	<	.0000 UG/L	5	.5	2014/03/10	3	72		2020/03	
	34488 TRICHLOROFLUOROMETHANE FREON 11	<	.0000 UG/L	150	5	2014/03/10	3	72		2020/03	
	81611 TRICHLOROTRIFLUOROETHANE (FREON 113)	<	.0000 UG/L	1200	10	2014/03/10	3	72		2020/03	
	39175 VINYL CHLORIDE	<	.0000 UG/L	.5	.5	2014/03/10	3	72		2020/03	
	81551 XYLENES (TOTAL)	<	.0000 UG/L	1750	0.5	2014/03/10	3	72		2020/03	
S2 REGULATED SOC											
	77443 1,2,3-TRICHLOROPROPANE (1,2,3-TCP)		UG/L	0.005	0.005		0	3		2018/01	DUE NOW
	39033 ATRAZINE	<	.0000 UG/L	1	.5	2014/03/10	3	72		2020/03	
	39055 SIMAZINE	<	.0000 UG/L	4	1	2014/03/10	3	72		2020/03	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO: 004

NAME: GOLDSIDE WELL 04 - RAW

CLASS: CMGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - 004	HILLVIEW WATER CO-GOLDSIDE-HIL	004	GOLDSIDE WELL 04 - RAW								
	GP SECONDARY/GP										
	00440 BICARBONATE ALKALINITY		120 MG/L	-----	-----	2017/08/15	10	36		2020/08	
	00916 CALCIUM		110 MG/L	-----	-----	2017/08/15	11	36		2020/08	
	00445 CARBONATE ALKALINITY	<	ND MG/L	-----	-----	2017/08/15	10	36		2020/08	
	00940 CHLORIDE		400 MG/L	500	-----	2017/08/15	10	36		2020/08	
	00081 COLOR	<	ND UNITS	15	-----	2017/06/20	10	36		2020/06	
	01042 COPPER	<	ND UG/L	1000	50	2017/08/15	10	36		2020/08	
	38260 FOAMING AGENTS (MBAS)	<	ND MG/L	.5	-----	2017/08/15	10	36		2020/08	
	00900 HARDNESS (TOTAL) AS CaCO3		290 MG/L	-----	-----	2017/08/15	10	36		2020/08	
	71830 HYDROXIDE ALKALINITY	<	ND MG/L	-----	-----	2017/08/15	9	36		2020/08	
	01045 IRON	<	ND UG/L	300	100	2019/03/20	18	36		2022/03	
	00927 MAGNESIUM		7.6 MG/L	-----	-----	2017/08/15	10	36		2020/08	
	01055 MANGANESE		23 UG/L	50	20	2019/03/20	18	36		2022/03	
	00086 ODOR THRESHOLD @ 60 C	<	ND TON	3	1	2017/06/20	10	36		2020/06	
	00403 PH, LABORATORY		7.5	-----	-----	2017/08/15	11	36		2020/08	
	01077 SILVER	<	ND UG/L	100	10	2017/08/15	10	36		2020/08	
	00929 SODIUM		180 MG/L	-----	-----	2017/08/15	10	36		2020/08	
	00095 SPECIFIC CONDUCTANCE		1400 US	1600	-----	2018/06/12	13	36		2021/06	
	00945 SULFATE		24 MG/L	500	.5	2017/08/15	10	36		2020/08	
	70300 TOTAL DISSOLVED SOLIDS		980 MG/L	1000	-----	2017/08/15	10	36		2020/08	
	82079 TURBIDITY, LABORATORY		0.47 NTU	5	.1	2017/06/20	10	36		2020/06	
	01092 ZINC		1100 UG/L	5000	50	2017/08/15	10	36		2020/08	
	IO INORGANIC										
	01105 ALUMINUM	<	ND UG/L	1000	50	2017/06/20	9	36		2020/06	
	01097 ANTIMONY	<	ND UG/L	6	6	2017/06/20	8	36		2020/06	
	01002 ARSENIC		3.8 UG/L	10	2	2017/06/20	10	36		2020/06	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO:

NAME: GOLDSIDE WELL 04 - RAW

CLASS: CMGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - IO INORGANIC											
004	81855 ASBESTOS	ND	MFL	7	.2	2019/01/09	4	108		2028/01	
	01007 BARIUM	<	ND UG/L	1000	100	2017/06/20	10	36		2020/06	
	01012 BERYLLIUM	<	ND UG/L	4	1	2017/06/20	8	36		2020/06	
	01027 CADMIUM	<	ND UG/L	5	1	2017/06/20	10	36		2020/06	
	01034 CHROMIUM (TOTAL)	<	ND UG/L	50	10	2017/06/20	10	36		2020/06	
	00951 FLUORIDE (F) (NATURAL-SOURCE)	0.40	MG/L	2	.1	2017/06/20	10	36		2020/06	
	71900 MERCURY	<	ND UG/L	2	1	2017/06/20	10	36		2020/06	
	01067 NICKEL	<	ND UG/L	100	10	2017/06/20	8	36		2020/06	
	A-031 PERCHLORATE	<	ND UG/L	6	4	2018/06/12	5	36		2021/06	
	01147 SELENIUM	<	ND UG/L	50	5	2017/06/20	10	36		2020/06	
	01059 THALLIUM	<	ND UG/L	2	1	2017/06/20	8	36		2020/06	
NI NITRATE/NITRITE											
	00618 NITRATE (AS N)	<	ND mg/L	10	.4	2018/06/12	24	12		2019/06	DUE NOW
	00620 NITRITE (AS N)	<	ND mg/L	1	.4	2017/06/20	11	36		2020/06	
RA RADIOLOGICAL											
	01501 GROSS ALPHA	10.6	PCI/L	15	3	2017/10/10	16	72	M	2023/10	
S1 REGULATED VOC											
	34506 1,1,1-TRICHLOROETHANE	<	ND UG/L	200	.5	2018/09/18	7	72		2024/09	
	34516 1,1,2,2-TETRACHLOROETHANE	<	ND UG/L	1	.5	2018/09/18	7	72		2024/09	
	34511 1,1,2-TRICHLOROETHANE	<	ND UG/L	5	.5	2018/09/18	7	72		2024/09	
	34496 1,1-DICHLOROETHANE	<	ND UG/L	5	.5	2018/09/18	7	72		2024/09	
	34501 1,1-DICHLOROETHYLENE	<	ND UG/L	6	.5	2018/09/18	7	72		2024/09	
	34551 1,2,4-TRICHLOROBENZENE	<	ND UG/L	5	.5	2018/09/18	6	72		2024/09	
	34536 1,2-DICHLOROBENZENE	<	ND UG/L	600	.5	2018/09/18	7	72		2024/09	
	34531 1,2-DICHLOROETHANE	<	ND UG/L	.5	.5	2018/09/18	7	72		2024/09	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO:

NAME: GOLDSIDE WELL 04 - RAW

CLASS: CMGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MONTHS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - S1 004	34541 1,2-DICHLOROPROPANE	<	ND UG/L	5	.5	2018/09/18	6	72		2024/09	
	34561 1,3-DICHLOROPROPENE (TOTAL)	<	ND UG/L	.5	.5	2018/09/18	6	72		2024/09	
	34571 1,4-DICHLOROBENZENE	<	ND UG/L	5	.5	2018/09/18	7	72		2024/09	
	34030 BENZENE	<	ND UG/L	1	.5	2018/09/18	7	72		2024/09	
	32102 CARBON TETRACHLORIDE	<	ND UG/L	.5	.5	2018/09/18	7	72		2024/09	
	77093 CIS-1,2-DICHLOROETHYLENE	<	ND UG/L	6	.5	2018/09/18	7	72		2024/09	
	34423 DICHLOROMETHANE	<	ND UG/L	5	.5	2018/09/18	7	72		2024/09	
	34371 ETHYL BENZENE	<	ND UG/L	300	.5	2018/09/18	7	72		2024/09	
	46491 METHYL-TERT-BUTYL-ETHER (MTBE)	<	ND UG/L	13	3	2018/09/18	6	72		2024/09	
	34301 MONOCHLOROBENZENE	<	ND UG/L	70	.5	2018/09/18	7	72		2024/09	
	77128 STYRENE	<	ND UG/L	100	.5	2018/09/18	6	72		2024/09	
	34475 TETRACHLOROETHYLENE	<	ND UG/L	5	.5	2018/09/18	7	72		2024/09	
	34010 TOLUENE	<	ND UG/L	150	.5	2018/09/18	7	72		2024/09	
	34546 TRANS-1,2-DICHLOROETHYLENE	<	ND UG/L	10	.5	2018/09/18	7	72		2024/09	
	39180 TRICHLOROETHYLENE	<	ND UG/L	5	.5	2018/09/18	7	72		2024/09	
	34488 TRICHLOROFLUOROMETHANE FREON 11	<	ND UG/L	150	5	2018/09/18	7	72		2024/09	
	81611 TRICHLOROTRIFLUOROETHANE (FREON 113)	<	ND UG/L	1200	10	2018/09/18	7	72		2024/09	
	39175 VINYL CHLORIDE	<	ND UG/L	.5	.5	2018/09/18	7	72		2024/09	
	81551 XYLENES (TOTAL)	<	ND UG/L	1750	0.5	2018/09/18	7	72		2024/09	
S2 REGULATED SOC											
77443 1,2,3-TRICHLOROPROPANE (1,2,3-TCP)	<	ND UG/L	0.005	0.005	2018/10/10	4	72		2024/10		
39033 ATRAZINE	<	ND UG/L	1	.5	2018/07/10	5	72		2024/07		
39055 SIMAZINE	<	ND UG/L	4	1	2018/07/10	5	72		2024/07		

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO: 005

NAME: HILLVIEW WELL 01 - RAW

CLASS: CMGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - 005	HILLVIEW WATER CO-GOLDSIDE-HIL	005	HILLVIEW WELL 01 - RAW								
	GP SECONDARY/GP										
	00440 BICARBONATE ALKALINITY		120 MG/L	-----	-----	2017/08/15	10	36		2020/08	
	00916 CALCIUM		110 MG/L	-----	-----	2017/08/15	11	36		2020/08	
	00445 CARBONATE ALKALINITY	<	ND MG/L	-----	-----	2017/08/15	10	36		2020/08	
	00940 CHLORIDE		310 MG/L	500	-----	2017/08/15	10	36		2020/08	
	00081 COLOR		5.0 UNITS	15	-----	2017/06/20	10	36		2020/06	
	01042 COPPER	<	ND UG/L	1000	50	2017/08/15	10	36		2020/08	
	38260 FOAMING AGENTS (MBAS)	<	ND MG/L	.5	-----	2017/08/15	10	36		2020/08	
	00900 HARDNESS (TOTAL) AS CaCO3		370 MG/L	-----	-----	2017/08/15	10	36		2020/08	
	71830 HYDROXIDE ALKALINITY	<	ND MG/L	-----	-----	2017/08/15	10	36		2020/08	
	01045 IRON		160 UG/L	300	100	2018/12/04	14	36		2021/12	
	00927 MAGNESIUM		24 MG/L	-----	-----	2017/08/15	10	36		2020/08	
	01055 MANGANESE	<	ND UG/L	50	20	2018/12/04	13	36		2021/12	
	00086 ODOR THRESHOLD @ 60 C	<	ND TON	3	1	2017/06/20	10	36		2020/06	
	00403 PH, LABORATORY		7.0	-----	-----	2017/08/15	11	36		2020/08	
	01077 SILVER	<	ND UG/L	100	10	2017/08/15	10	36		2020/08	
	00929 SODIUM		68 MG/L	-----	-----	2017/08/15	10	36		2020/08	
	00095 SPECIFIC CONDUCTANCE		960 US	1600	-----	2018/06/12	13	36		2021/06	
	00945 SULFATE		8.5 MG/L	500	.5	2017/08/15	10	36		2020/08	
	70300 TOTAL DISSOLVED SOLIDS		910 MG/L	1000	-----	2017/08/15	10	36		2020/08	
	82079 TURBIDITY, LABORATORY		2.6 NTU	5	.1	2017/06/20	10	36		2020/06	
	01092 ZINC	<	ND UG/L	5000	50	2017/08/15	10	36		2020/08	
	IO INORGANIC										
	01105 ALUMINUM	<	ND UG/L	1000	50	2017/06/20	9	36		2020/06	
	01097 ANTIMONY	<	ND UG/L	6	6	2017/06/20	8	36		2020/06	
	01002 ARSENIC	<	ND UG/L	10	2	2017/06/20	10	36		2020/06	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO:

NAME: HILLVIEW WELL 01 - RAW

CLASS: CMGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - IO INORGANIC											
005	81855 ASBESTOS	<	.0000 MFL	7	.2	2011/11/15	4	108		2020/11	
	01007 BARIUM	<	ND UG/L	1000	100	2017/06/20	10	36		2020/06	
	01012 BERYLLIUM	<	ND UG/L	4	1	2017/06/20	8	36		2020/06	
	01027 CADMIUM	<	ND UG/L	5	1	2017/06/20	10	36		2020/06	
	01034 CHROMIUM (TOTAL)	<	ND UG/L	50	10	2017/06/20	10	36		2020/06	
	00951 FLUORIDE (F) (NATURAL-SOURCE)	<	ND MG/L	2	.1	2017/06/20	12	36		2020/06	
	71900 MERCURY	<	ND UG/L	2	.1	2017/06/20	10	36		2020/06	
	01067 NICKEL	<	ND UG/L	100	10	2017/06/20	8	36		2020/06	
	A-031 PERCHLORATE	<	ND UG/L	6	4	2018/06/12	5	36		2021/06	
	01147 SELENIUM	<	ND UG/L	50	5	2017/06/20	10	36		2020/06	
	01059 THALLIUM	<	ND UG/L	2	1	2017/06/20	8	36		2020/06	
NI NITRATE/NITRITE											
	00618 NITRATE (AS N)		2.8 mg/L	10	.4	2018/06/12	25	12		2019/06	DUE NOW
	00620 NITRITE (AS N)	<	ND mg/L	1	.4	2017/06/20	10	36		2020/06	
RA RADIOLOGICAL											
	01501 GROSS ALPHA		12.1 PCI/L	15	3	2017/10/10	16	72	M	2023/10	
S1 REGULATED VOC											
	34506 1,1,1- TRICHLOROETHANE	<	ND UG/L	200	.5	2018/09/18	6	72		2024/09	
	34516 1,1,2,2- TETRACHLOROETHANE	<	ND UG/L	1	.5	2018/09/18	6	72		2024/09	
	34511 1,1,2- TRICHLOROETHANE	<	ND UG/L	5	.5	2018/09/18	6	72		2024/09	
	34496 1,1-DICHLOROETHANE	<	ND UG/L	5	.5	2018/09/18	6	72		2024/09	
	34501 1,1- DICHLOROETHYLENE	<	ND UG/L	6	.5	2018/09/18	6	72		2024/09	
	34551 1,2,4- TRICHLOROBENZENE	<	ND UG/L	5	.5	2018/09/18	6	72		2024/09	
	34536 1,2- DICHLOROBENZENE	<	ND UG/L	600	.5	2018/09/18	6	72		2024/09	
	34531 1,2-DICHLOROETHANE	<	ND UG/L	.5	.5	2018/09/18	6	72		2024/09	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO:

NAME: HILLVIEW WELL 01 - RAW

CLASS: CMGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - S1 005	34541 1,2-DICHLOROPROPANE	<	ND UG/L	5	.5	2018/09/18	6	72		2024/09	
	34561 1,3-DICHLOROPROPENE (TOTAL)	<	ND UG/L	.5	.5	2018/09/18	6	72		2024/09	
	34571 1,4-DICHLOROBENZENE	<	ND UG/L	5	.5	2018/09/18	6	72		2024/09	
	34030 BENZENE	<	ND UG/L	1	.5	2018/09/18	6	72		2024/09	
	32102 CARBON TETRACHLORIDE	<	ND UG/L	.5	.5	2018/09/18	6	72		2024/09	
	77093 CIS-1,2-DICHLOROETHYLENE	<	ND UG/L	6	.5	2018/09/18	6	72		2024/09	
	34423 DICHLOROMETHANE	<	ND UG/L	5	.5	2018/09/18	6	72		2024/09	
	34371 ETHYL BENZENE	<	ND UG/L	300	.5	2018/09/18	6	72		2024/09	
	46491 METHYL-TERT-BUTYL-ETHER (MTBE)	<	ND UG/L	13	3	2018/09/18	9	72		2024/09	
	34301 MONOCHLOROBENZENE	<	ND UG/L	70	.5	2018/09/18	6	72		2024/09	
	77128 STYRENE	<	ND UG/L	100	.5	2018/09/18	6	72		2024/09	
	34475 TETRACHLOROETHYLENE	<	ND UG/L	5	.5	2018/09/18	6	72		2024/09	
	34010 TOLUENE	<	ND UG/L	150	.5	2018/09/18	6	72		2024/09	
	34546 TRANS-1,2-DICHLOROETHYLENE	<	ND UG/L	10	.5	2018/09/18	6	72		2024/09	
	39180 TRICHLOROETHYLENE	<	ND UG/L	5	.5	2018/09/18	6	72		2024/09	
	34488 TRICHLOROFLUOROMETHANE FREON 11	<	ND UG/L	150	5	2018/09/18	6	72		2024/09	
	81611 TRICHLOROTRIFLUOROETHANE (FREON 113)	<	ND UG/L	1200	10	2018/09/18	6	72		2024/09	
	39175 VINYL CHLORIDE	<	ND UG/L	.5	.5	2018/09/18	6	72		2024/09	
	81551 XYLENES (TOTAL)	<	ND UG/L	1750	0.5	2018/09/18	6	72		2024/09	
S2 REGULATED SOC											
	77443 1,2,3-TRICHLOROPROPANE (1,2,3-TCP)	<	ND UG/L	0.005	0.005	2018/10/10	4	72		2024/10	
	39033 ATRAZINE	<	ND UG/L	1	.5	2018/07/10	3	72		2024/07	
	39055 SIMAZINE	<	ND UG/L	4	1	2018/07/10	3	72		2024/07	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO: 006

NAME: RIVER CREEK WELL 01 - RAW

CLASS: CMGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - 006	HILLVIEW WATER CO-GOLDSIDE-HIL	006	RIVER CREEK WELL 01 - RAW								
	GP SECONDARY/GP										
	00440 BICARBONATE ALKALINITY	75	MG/L	-----	-----	2017/08/15	6	36		2020/08	
	00916 CALCIUM	19	MG/L	-----	-----	2017/08/15	6	36		2020/08	
	00445 CARBONATE ALKALINITY	<	ND MG/L	-----	-----	2017/08/15	6	36		2020/08	
	00940 CHLORIDE	21	MG/L	500	-----	2017/08/15	6	36		2020/08	
	00081 COLOR	<	ND UNITS	15	-----	2017/06/20	6	36		2020/06	
	01042 COPPER	<	ND UG/L	1000	50	2017/08/15	6	36		2020/08	
	38260 FOAMING AGENTS (MBAS)	<	ND MG/L	.5	-----	2017/08/15	6	36		2020/08	
	00900 HARDNESS (TOTAL) AS CaCO3	67	MG/L	-----	-----	2017/08/15	6	36		2020/08	
	71830 HYDROXIDE ALKALINITY	<	ND MG/L	-----	-----	2017/08/15	6	36		2020/08	
	01045 IRON	200	UG/L	300	100	2017/08/15	6	36		2020/08	
	00927 MAGNESIUM	4.7	MG/L	-----	-----	2017/08/15	6	36		2020/08	
	01055 MANGANESE	<	ND UG/L	50	20	2017/08/15	6	36		2020/08	
	00086 ODOR THRESHOLD @ 60 C	<	ND TON	3	1	2017/06/20	6	36		2020/06	
	00403 PH, LABORATORY	6.9		-----	-----	2017/08/15	7	36		2020/08	
	01077 SILVER	<	ND UG/L	100	10	2017/08/15	6	36		2020/08	
	00929 SODIUM	15	MG/L	-----	-----	2017/08/15	6	36		2020/08	
	00095 SPECIFIC CONDUCTANCE	240	US	1600	-----	2018/06/12	9	36		2021/06	
	00945 SULFATE	3.3	MG/L	500	.5	2017/08/15	6	36		2020/08	
	70300 TOTAL DISSOLVED SOLIDS	160	MG/L	1000	-----	2017/08/15	6	36		2020/08	
	82079 TURBIDITY, LABORATORY	1.2	NTU	5	.1	2017/06/20	6	36		2020/06	
	01092 ZINC	<	ND UG/L	5000	50	2017/08/15	6	36		2020/08	
	IO INORGANIC										
	01105 ALUMINUM	<	ND UG/L	1000	50	2017/06/20	6	36		2020/06	
	01097 ANTIMONY	<	ND UG/L	6	6	2017/06/20	6	36		2020/06	
	01002 ARSENIC	<	ND UG/L	10	2	2017/06/20	6	36		2020/06	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO:

NAME: RIVER CREEK WELL 01 - RAW

CLASS: CMGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MONTHS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - IO INORGANIC											
006	81855 ASBESTOS	<	.0000 MFL	7	.2	2010/11/09	3	108		2019/11	
	01007 BARIUM	<	ND UG/L	1000	100	2017/06/20	6	36		2020/06	
	01012 BERYLLIUM	<	ND UG/L	4	1	2017/06/20	6	36		2020/06	
	01027 CADMIUM	<	ND UG/L	5	1	2017/06/20	6	36		2020/06	
	01034 CHROMIUM (TOTAL)	<	ND UG/L	50	10	2017/06/20	6	36		2020/06	
	00951 FLUORIDE (F) (NATURAL-SOURCE)	<	ND MG/L	2	.1	2017/06/20	7	36		2020/06	
	71900 MERCURY	<	ND UG/L	2	1	2017/06/20	6	36		2020/06	
	01067 NICKEL	<	ND UG/L	100	10	2017/06/20	6	36		2020/06	
	A-031 PERCHLORATE	<	ND UG/L	6	4	2018/06/12	5	36		2021/06	
	01147 SELENIUM	<	ND UG/L	50	5	2017/06/20	6	36		2020/06	
	01059 THALLIUM	<	ND UG/L	2	1	2017/06/20	6	36		2020/06	
NI NITRATE/NITRITE											
	00618 NITRATE (AS N)		3.4 mg/L	10	.4	2018/06/12	18	12		2019/06	DUE NOW
	00620 NITRITE (AS N)	<	ND mg/L	1	.4	2017/06/20	9	36		2020/06	
RA RADIOLOGICAL											
	01501 GROSS ALPHA	<	.0000 PCI/L	15	3	2014/07/30	10	108	M	2023/07	
S1 REGULATED VOC											
	34506 1,1,1-TRICHLOROETHANE	<	ND UG/L	200	.5	2018/09/18	4	72		2024/09	
	34516 1,1,2,2-TETRACHLOROETHANE	<	ND UG/L	1	.5	2018/09/18	4	72		2024/09	
	34511 1,1,2-TRICHLOROETHANE	<	ND UG/L	5	.5	2018/09/18	4	72		2024/09	
	34496 1,1-DICHLOROETHANE	<	ND UG/L	5	.5	2018/09/18	4	72		2024/09	
	34501 1,1-DICHLOROETHYLENE	<	ND UG/L	6	.5	2018/09/18	4	72		2024/09	
	34551 1,2,4-TRICHLOROBENZENE	<	ND UG/L	5	.5	2018/09/18	4	72		2024/09	
	34536 1,2-DICHLOROBENZENE	<	ND UG/L	600	.5	2018/09/18	4	72		2024/09	
	34531 1,2-DICHLOROETHANE	<	ND UG/L	.5	.5	2018/09/18	4	72		2024/09	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO:

NAME: RIVER CREEK WELL 01 - RAW

CLASS: CMGD

STATUS: Active

PCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MONTHS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - S1 006	34541 1,2-DICHLOROPROPANE	<	ND UG/L	5	.5	2018/09/18	4	72		2024/09	
	34561 1,3-DICHLOROPROPENE (TOTAL)	<	ND UG/L	.5	.5	2018/09/18	4	72		2024/09	
	34571 1,4-DICHLOROBENZENE	<	ND UG/L	5	.5	2018/09/18	4	72		2024/09	
	34030 BENZENE	<	ND UG/L	1	.5	2018/09/18	4	72		2024/09	
	32102 CARBON TETRACHLORIDE	<	ND UG/L	.5	.5	2018/09/18	4	72		2024/09	
	77093 CIS-1,2-DICHLOROETHYLENE	<	ND UG/L	6	.5	2018/09/18	4	72		2024/09	
	34423 DICHLOROMETHANE	<	ND UG/L	5	.5	2018/09/18	4	72		2024/09	
	34371 ETHYL BENZENE	<	ND UG/L	300	.5	2018/09/18	4	72		2024/09	
	46491 METHYL-TERT-BUTYL-ETHER (MTBE)	<	ND UG/L	13	3	2018/09/18	5	72		2024/09	
	34301 MONOCHLOROBENZENE	<	ND UG/L	70	.5	2018/09/18	4	72		2024/09	
	77128 STYRENE	<	ND UG/L	100	.5	2018/09/18	4	72		2024/09	
	34475 TETRACHLOROETHYLENE	<	ND UG/L	5	.5	2018/09/18	4	72		2024/09	
	34010 TOLUENE	<	ND UG/L	150	.5	2018/09/18	4	72		2024/09	
	34546 TRANS-1,2-DICHLOROETHYLENE	<	ND UG/L	10	.5	2018/09/18	4	72		2024/09	
	39180 TRICHLOROETHYLENE	<	ND UG/L	5	.5	2018/09/18	4	72		2024/09	
	34488 TRICHLOROFLUOROMETHANE FREON 11	<	ND UG/L	150	5	2018/09/18	4	72		2024/09	
	81611 TRICHLOROTRIFLUOROETHANE (FREON 113)	<	ND UG/L	1200	10	2018/09/18	4	72		2024/09	
	39175 VINYL CHLORIDE	<	ND UG/L	.5	.5	2018/09/18	4	72		2024/09	
	81551 XYLENES (TOTAL)	<	ND UG/L	1750	0.5	2018/09/18	4	72		2024/09	
S2 REGULATED SOC											
	77443 1,2,3-TRICHLOROPROPANE (1,2,3-TCP)	<	ND UG/L	0.005	0.005	2018/10/10	4	72		2024/10	
	39033 ATRAZINE	<	ND UG/L	1	.5	2018/07/10	4	72		2024/07	
	39055 SIMAZINE	<	ND UG/L	4	1	2018/07/10	4	72		2024/07	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO: 007

NAME: RIVER CREEK WELL 02 - RAW

CLASS: CMGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION		LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES	
2010014 - 007	HILLVIEW WATER CO-GOLDSIDE-HIL		007	RIVER CREEK WELL 02 - RAW									
	GP SECONDARY/GP												
	00440	BICARBONATE ALKALINITY		95 MG/L	-----	-----	2017/08/15	6	36		2020/08		
	00916	CALCIUM		24 MG/L	-----	-----	2017/08/15	6	36		2020/08		
	00445	CARBONATE ALKALINITY	<	ND MG/L	-----	-----	2017/08/15	6	36		2020/08		
	00940	CHLORIDE		18 MG/L	500	-----	2017/08/15	6	36		2020/08		
	00081	COLOR		10 UNITS	15	-----	2017/06/20	6	36		2020/06		
	01042	COPPER	<	ND UG/L	1000	50	2017/08/15	6	36		2020/08		
	38260	FOAMING AGENTS (MBAS)	<	ND MG/L	.5	-----	2017/08/15	6	36		2020/08		
	00900	HARDNESS (TOTAL) AS CaCO3		86 MG/L	-----	-----	2017/08/15	6	36		2020/08		
	71830	HYDROXIDE ALKALINITY	<	ND MG/L	-----	-----	2017/08/15	6	36		2020/08		
	01045	IRON		540 UG/L	300	100	2019/04/16	36	36		2022/04		
	00927	MAGNESIUM		6.2 MG/L	-----	-----	2017/08/15	6	36		2020/08		
	01055	MANGANESE		21 UG/L	50	20	2018/12/04	33	36		2021/12		
	00086	ODOR THRESHOLD @ 60 C	<	ND TON	3	1	2017/06/20	6	36		2020/06		
	00403	PH, LABORATORY		7.0	-----	-----	2017/08/15	7	36		2020/08		
	01077	SILVER	<	ND UG/L	100	10	2017/08/15	6	36		2020/08		
	00929	SODIUM		14 MG/L	-----	-----	2017/08/15	6	36		2020/08		
	00095	SPECIFIC CONDUCTANCE		250 US	1600	-----	2018/06/12	9	36		2021/06		
	00945	SULFATE		1.2 MG/L	500	.5	2017/08/15	6	36		2020/08		
	70300	TOTAL DISSOLVED SOLIDS		190 MG/L	1000	-----	2017/08/15	6	36		2020/08		
	82079	TURBIDITY, LABORATORY		4.3 NTU	5	.1	2017/06/20	6	36		2020/06		
	01092	ZINC	<	ND UG/L	5000	50	2017/08/15	6	36		2020/08		
		IO INORGANIC											
		01105	ALUMINUM	<	ND UG/L	1000	50	2017/06/20	6	36		2020/06	
		01097	ANTIMONY	<	ND UG/L	6	6	2017/06/20	6	36		2020/06	
		01002	ARSENIC	<	ND UG/L	10	2	2017/06/20	6	36		2020/06	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO:

NAME: RIVER CREEK WELL 02 - RAW

CLASS: CMGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - IO INORGANIC											
007											
	81855 ASBESTOS	ND	MFL	7	.2	2015/09/15	2	108		2024/09	
	01007 BARIUM	<	ND UG/L	1000	100	2017/06/20	6	36		2020/06	
	01012 BERYLLIUM	<	ND UG/L	4	1	2017/06/20	6	36		2020/06	
	01027 CADMIUM	<	ND UG/L	5	1	2017/06/20	6	36		2020/06	
	01034 CHROMIUM (TOTAL)	<	ND UG/L	50	10	2017/06/20	6	36		2020/06	
	00951 FLUORIDE (F) (NATURAL-SOURCE)	<	ND MG/L	2	.1	2017/06/20	6	36		2020/06	
	71900 MERCURY	<	ND UG/L	2	1	2017/06/20	6	36		2020/06	
	01067 NICKEL	<	ND UG/L	100	10	2017/06/20	6	36		2020/06	
	A-031 PERCHLORATE	<	ND UG/L	6	4	2018/06/12	5	36		2021/06	
	01147 SELENIUM	<	ND UG/L	50	5	2017/06/20	6	36		2020/06	
	01059 THALLIUM	<	ND UG/L	2	1	2017/06/20	6	36		2020/06	
NI NITRATE/NITRITE											
	00618 NITRATE (AS N)	5.3 mg/L		10	.4	2018/06/12	18	12		2019/06	DUE NOW
	00620 NITRITE (AS N)	<	ND mg/L	1	.4	2017/06/20	8	36		2020/06	
RA RADIOLOGICAL											
	01501 GROSS ALPHA	5.03 PCI/L		15	3	2017/10/10	10	72	M	2023/10	
S1 REGULATED VOC											
	34506 1,1,1-TRICHLOROETHANE	<	ND UG/L	200	.5	2018/09/18	5	72		2024/09	
	34516 1,1,2,2-TETRACHLOROETHANE	<	ND UG/L	1	.5	2018/09/18	5	72		2024/09	
	34511 1,1,2-TRICHLOROETHANE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34496 1,1-DICHLOROETHANE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34501 1,1-DICHLOROETHYLENE	<	ND UG/L	6	.5	2018/09/18	5	72		2024/09	
	34551 1,2,4-TRICHLOROBENZENE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34536 1,2-DICHLOROBENZENE	<	ND UG/L	600	.5	2018/09/18	5	72		2024/09	
	34531 1,2-DICHLOROETHANE	<	ND UG/L	.5	.5	2018/09/18	5	72		2024/09	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO:

NAME: RIVER CREEK WELL 02 - RAW

CLASS: CMGD

STATUS: Active

PCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MONTHS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - S1 007	34541 1,2-DICHLOROPROPANE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34561 1,3-DICHLOROPROPENE (TOTAL)	<	ND UG/L	.5	.5	2018/09/18	5	72		2024/09	
	34571 1,4-DICHLOROBENZENE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34030 BENZENE	<	ND UG/L	1	.5	2018/09/18	5	72		2024/09	
	32102 CARBON TETRACHLORIDE	<	ND UG/L	.5	.5	2018/09/18	5	72		2024/09	
	77093 CIS-1,2-DICHLOROETHYLENE	<	ND UG/L	6	.5	2018/09/18	5	72		2024/09	
	34423 DICHLOROMETHANE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34371 ETHYL BENZENE	<	ND UG/L	300	.5	2018/09/18	5	72		2024/09	
	46491 METHYL-TERT-BUTYL-ETHER (MTBE)	<	ND UG/L	13	3	2018/09/18	6	72		2024/09	
	34301 MONOCHLOROBENZENE	<	ND UG/L	70	.5	2018/09/18	5	72		2024/09	
	77128 STYRENE	<	ND UG/L	100	.5	2018/09/18	5	72		2024/09	
	34475 TETRACHLOROETHYLENE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34010 TOLUENE	<	ND UG/L	150	.5	2018/09/18	5	72		2024/09	
	34546 TRANS-1,2-DICHLOROETHYLENE	<	ND UG/L	10	.5	2018/09/18	5	72		2024/09	
	39180 TRICHLOROETHYLENE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34488 TRICHLOROFLUOROMETHANE FREON 11	<	ND UG/L	150	5	2018/09/18	5	72		2024/09	
	81611 TRICHLOROTRIFLUOROETHANE (FREON 113)	<	ND UG/L	1200	10	2018/09/18	5	72		2024/09	
	39175 VINYL CHLORIDE	<	ND UG/L	.5	.5	2018/09/18	5	72		2024/09	
	81551 XYLENES (TOTAL)	<	ND UG/L	1750	0.5	2018/09/18	5	72		2024/09	
S2 REGULATED SOC											
	77443 1,2,3-TRICHLOROPROPANE (1,2,3-TCP)	<	ND UG/L	0.005	0.005	2018/10/10	4	72		2024/10	
	39033 ATRAZINE	<	ND UG/L	1	.5	2018/07/10	4	72		2024/07	
	39055 SIMAZINE	<	ND UG/L	4	1	2018/07/10	4	72		2024/07	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO: 009

NAME: GOLDSIDE WELL 06 - RAW

CLASS: CMGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION		LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - 009	HILLVIEW WATER CO-GOLDSIDE-HIL		009	GOLDSIDE WELL 06 - RAW								
	GP SECONDARY/GP											
	00440 BICARBONATE ALKALINITY		120	MG/L	-----	-----	2018/09/18	8	36		2021/09	
	00916 CALCIUM		92	MG/L	-----	-----	2018/09/18	8	36		2021/09	
	00445 CARBONATE ALKALINITY	<	ND	MG/L	-----	-----	2018/09/18	8	36		2021/09	
	00940 CHLORIDE		310	MG/L	500	-----	2018/09/18	8	36		2021/09	
	00081 COLOR		5.0	UNITS	15	-----	2018/09/18	8	36		2021/09	
	01042 COPPER	<	ND	UG/L	1000	50	2018/09/18	8	36		2021/09	
	38260 FOAMING AGENTS (MBAS)	<	ND	MG/L	.5	-----	2018/09/18	8	36		2021/09	
	00900 HARDNESS (TOTAL) AS CaCO3		260	MG/L	-----	-----	2018/09/18	8	36		2021/09	
	71830 HYDROXIDE ALKALINITY	<	ND	MG/L	-----	-----	2018/09/18	8	36		2021/09	
	01045 IRON		150	UG/L	300	100	2019/04/10	35	36		2022/04	
	00927 MAGNESIUM		6.6	MG/L	-----	-----	2018/09/18	8	36		2021/09	
	01055 MANGANESE	<	ND	UG/L	50	20	2019/04/10	35	36		2022/04	
	00086 ODOR THRESHOLD @ 60 C	<	ND	TON	3	1	2018/09/18	8	36		2021/09	
	00403 PH, LABORATORY		7.6		-----	-----	2018/09/18	8	36		2021/09	
	01077 SILVER	<	ND	UG/L	100	10	2018/09/18	8	36		2021/09	
	00929 SODIUM		150	MG/L	-----	-----	2018/09/18	8	36		2021/09	
	00095 SPECIFIC CONDUCTANCE		1200	US	1600	-----	2018/09/18	9	36		2021/09	
	00945 SULFATE		20	MG/L	500	.5	2018/09/18	8	36		2021/09	
	70300 TOTAL DISSOLVED SOLIDS		730	MG/L	1000	-----	2018/09/18	8	36		2021/09	
	82079 TURBIDITY, LABORATORY		5.0	NTU	5	.1	2018/09/18	8	36		2021/09	
	01092 ZINC	<	ND	UG/L	5000	50	2018/09/18	8	36		2021/09	
	IO INORGANIC											
	01105 ALUMINUM	<	ND	UG/L	1000	50	2018/09/18	8	36		2021/09	
	01097 ANTIMONY	<	ND	UG/L	6	6	2018/09/18	8	36		2021/09	
	01002 ARSENIC		4.2	UG/L	10	2	2018/09/18	8	36		2021/09	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO:

NAME: GOLDSIDE WELL 06 - RAW

CLASS: CMGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - IO INORGANIC											
009	81855 ASBESTOS	<	.0000 MFL	7	.2	2010/11/09	3	108		2019/11	
	01007 BARIUM	<	ND UG/L	1000	100	2018/09/18	8	36		2021/09	
	01012 BERYLLIUM	<	ND UG/L	4	1	2018/09/18	8	36		2021/09	
	01027 CADMIUM	<	ND UG/L	5	1	2018/09/18	8	36		2021/09	
	01034 CHROMIUM (TOTAL)	<	ND UG/L	50	10	2018/09/18	8	36		2021/09	
	00951 FLUORIDE (F) (NATURAL-SOURCE)		0.38 MG/L	2	.1	2018/09/18	8	36		2021/09	
	71900 MERCURY	<	ND UG/L	2	1	2018/09/18	8	36		2021/09	
	01067 NICKEL	<	ND UG/L	100	10	2018/09/18	8	36		2021/09	
	A-031 PERCHLORATE	<	ND UG/L	6	4	2018/09/18	5	36		2021/09	
	01147 SELENIUM	<	ND UG/L	50	5	2018/09/18	8	36		2021/09	
	01059 THALLIUM	<	ND UG/L	2	1	2018/09/18	8	36		2021/09	
NI NITRATE/NITRITE											
	00618 NITRATE (AS N)	<	ND mg/L	10	.4	2018/09/18	21	12		2019/09	
	00620 NITRITE (AS N)	<	ND mg/L	1	.4	2018/09/18	10	36		2021/09	
RA RADIOLOGICAL											
	01501 GROSS ALPHA		6.29 PCI/L	15	3	2018/09/18	14	36		2021/09	
S1 REGULATED VOC											
	34506 1,1,1-TRICHLOROETHANE	<	ND UG/L	200	.5	2018/09/18	5	72		2024/09	
	34516 1,1,2,2-TETRACHLOROETHANE	<	ND UG/L	1	.5	2018/09/18	5	72		2024/09	
	34511 1,1,2-TRICHLOROETHANE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34496 1,1-DICHLOROETHANE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34501 1,1-DICHLOROETHYLENE	<	ND UG/L	6	.5	2018/09/18	5	72		2024/09	
	34551 1,2,4-TRICHLOROBENZENE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34536 1,2-DICHLOROBENZENE	<	ND UG/L	600	.5	2018/09/18	5	72		2024/09	
	34531 1,2-DICHLOROETHANE	<	ND UG/L	.5	.5	2018/09/18	5	72		2024/09	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO:

NAME: GOLDSIDE WELL 06 - RAW

CLASS: CMGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION		LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - S1 009	34541	1,2-DICHLOROPROPANE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34561	1,3-DICHLOROPROPENE (TOTAL)	<	ND UG/L	.5	.5	2018/09/18	5	72		2024/09	
	34571	1,4-DICHLOROBENZENE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34030	BENZENE	<	ND UG/L	1	.5	2018/09/18	5	72		2024/09	
	32102	CARBON TETRACHLORIDE	<	ND UG/L	.5	.5	2018/09/18	5	72		2024/09	
	77093	CIS-1,2-DICHLOROETHYLENE	<	ND UG/L	6	.5	2018/09/18	5	72		2024/09	
	34423	DICHLOROMETHANE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34371	ETHYL BENZENE	<	ND UG/L	300	.5	2018/09/18	5	72		2024/09	
	46491	METHYL-TERT-BUTYL-ETHER (MTBE)	<	ND UG/L	13	3	2018/09/18	5	72		2024/09	
	34301	MONOCHLOROBENZENE	<	ND UG/L	70	.5	2018/09/18	5	72		2024/09	
	77128	STYRENE	<	ND UG/L	100	.5	2018/09/18	5	72		2024/09	
	34475	TETRACHLOROETHYLENE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34010	TOLUENE	<	ND UG/L	150	.5	2018/09/18	5	72		2024/09	
	34546	TRANS-1,2-DICHLOROETHYLENE	<	ND UG/L	10	.5	2018/09/18	5	72		2024/09	
	39180	TRICHLOROETHYLENE	<	ND UG/L	5	.5	2018/09/18	5	72		2024/09	
	34488	TRICHLOROFLUOROMETHANE FREON 11	<	ND UG/L	150	5	2018/09/18	5	72		2024/09	
	81611	TRICHLOROTRIFLUOROETHANE (FREON 113)	<	ND UG/L	1200	10	2018/09/18	5	72		2024/09	
	39175	VINYL CHLORIDE	<	ND UG/L	.5	.5	2018/09/18	5	72		2024/09	
	81551	XYLENES (TOTAL)	<	ND UG/L	1750	0.5	2018/09/18	5	72		2024/09	
S2 REGULATED SOC												
77443	1,2,3-TRICHLOROPROPANE (1,2,3-TCP)	<	ND UG/L	0.005	0.005	2018/10/10	4	72		2024/10		
39033	ATRAZINE	<	ND UG/L	1	.5	2018/07/10	5	72		2024/07		
39055	SIMAZINE	<	ND UG/L	4	1	2018/07/10	5	72		2024/07		

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO: 010

NAME: MIAMI CREEK WELL 01 - STBY

CLASS: STCD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - 010	HILLVIEW WATER CO-GOLDSIDE-HIL	010	MIAMI CREEK WELL 01 - STBY								
	IO INORGANIC										
	01105 ALUMINUM	<	.0000 UG/L	1000	50	2012/05/29	3	108		2021/05	
	01097 ANTIMONY	<	.0000 UG/L	6	6	2012/05/29	3	108		2021/05	
	01002 ARSENIC	<	.0000 UG/L	10	2	2012/05/29	3	108		2021/05	
	81855 ASBESTOS	<	.0000 MFL	7	.2	2014/07/30	2	108		2023/07	
	01007 BARIUM	<	.0000 UG/L	1000	100	2012/05/29	3	108		2021/05	
	01012 BERYLLIUM	<	.0000 UG/L	4	1	2012/05/29	3	108		2021/05	
	01027 CADMIUM	<	.0000 UG/L	5	1	2012/05/29	3	108		2021/05	
	01034 CHROMIUM (TOTAL)	<	.0000 UG/L	50	10	2012/05/29	3	108		2021/05	
	00951 FLUORIDE (F) (NATURAL-SOURCE)		.5200 MG/L	2	.1	2011/11/15	3	108		2020/11	
	71900 MERCURY	<	.0000 UG/L	2	1	2012/05/29	3	108		2021/05	
	01067 NICKEL	<	.0000 UG/L	100	10	2012/05/29	3	108		2021/05	
	A-031 PERCHLORATE	<	ND UG/L	6	4	2017/07/11	5	108		2026/07	
	01147 SELENIUM	<	.0000 UG/L	50	5	2012/05/29	3	108		2021/05	
	01059 THALLIUM	<	.0000 UG/L	2	1	2012/05/29	3	108		2021/05	
	NI NITRATE/NITRITE										
	00618 NITRATE (AS N)		5.2 mg/L	10	.4	2018/10/10	14	12	M	2019/10	
	00620 NITRITE (AS N)	<	.0000 UG/L	1000	400	2011/12/07	4	108		2020/12	
	RA RADIOLOGICAL										
	01501 GROSS ALPHA		21.1 PCI/L	15	3	2017/07/11	11	108		2026/07	
	S1 REGULATED VOC										
	34506 1,1,1-TRICHLOROETHANE	<	.0000 UG/L	200	.5	2012/05/29	3	108		2021/05	
	34516 1,1,2,2-TETRACHLOROETHANE	<	.0000 UG/L	1	.5	2012/05/29	3	108		2021/05	
	34511 1,1,2-TRICHLOROETHANE	<	.0000 UG/L	5	.5	2012/05/29	3	108		2021/05	
	34496 1,1-DICHLOROETHANE	<	.0000 UG/L	5	.5	2012/05/29	3	108		2021/05	
	34501 1,1-DICHLOROETHYLENE	<	.0000 UG/L	6	.5	2012/05/29	3	108		2021/05	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014				NAME: HILLVIEW WATER CO-GOLDSIDE-HIL				COUNTY: MADERA			
SOURCE NO:				NAME: MIAMI CREEK WELL 01 - STBY				CLASS: STCD			STATUS: Active
2010014 - S1 010	34551	1,2,4-TRICHLOROBENZENE	<	.0000 UG/L	5	.5	2012/05/29	3	108	2021/05	
	34536	1,2-DICHLOROBENZENE	<	.0000 UG/L	600	.5	2012/05/29	3	108	2021/05	
	34531	1,2-DICHLOROETHANE	<	.0000 UG/L	.5	.5	2012/05/29	3	108	2021/05	
	34541	1,2-DICHLOROPROPANE	<	.0000 UG/L	5	.5	2012/05/29	3	108	2021/05	
	34561	1,3-DICHLOROPROPENE (TOTAL)	<	.0000 UG/L	.5	.5	2012/05/29	3	108	2021/05	
	34571	1,4-DICHLOROBENZENE	<	.0000 UG/L	5	.5	2012/05/29	3	108	2021/05	
	34030	BENZENE	<	.0000 UG/L	1	.5	2012/05/29	3	108	2021/05	
	32102	CARBON TETRACHLORIDE	<	.0000 UG/L	.5	.5	2012/05/29	3	108	2021/05	
	77093	CIS-1,2-DICHLOROETHYLENE	<	.0000 UG/L	6	.5	2012/05/29	3	108	2021/05	
	34423	DICHLOROMETHANE	<	.0000 UG/L	5	.5	2012/05/29	3	108	2021/05	
	34371	ETHYL BENZENE	<	.0000 UG/L	300	.5	2012/05/29	3	108	2021/05	
	46491	METHYL-TERT-BUTYL-ETHER (MTBE)	<	.0000 UG/L	13	3	2012/05/29	3	108	2021/05	
	34301	MONOCHLOROBENZENE	<	.0000 UG/L	70	.5	2012/05/29	3	108	2021/05	
	77128	STYRENE	<	.0000 UG/L	100	.5	2012/05/29	3	108	2021/05	
	34475	TETRACHLOROETHYLENE	<	.0000 UG/L	5	.5	2012/05/29	3	108	2021/05	
	34010	TOLUENE	<	.0000 UG/L	150	.5	2012/05/29	3	108	2021/05	
	34546	TRANS-1,2-DICHLOROETHYLENE	<	.0000 UG/L	10	.5	2012/05/29	3	108	2021/05	
	39180	TRICHLOROETHYLENE	<	.0000 UG/L	5	.5	2012/05/29	3	108	2021/05	
	34488	TRICHLOROFLUOROMETHANE FREON 11	<	.0000 UG/L	150	5	2012/05/29	3	108	2021/05	
	81611	TRICHLOROTRIFLUOROETHANE (FREON 113)	<	.0000 UG/L	1200	10	2012/05/29	3	108	2021/05	
	39175	VINYL CHLORIDE	<	.0000 UG/L	.5	.5	2012/05/29	3	108	2021/05	
	81551	XYLENES (TOTAL)	<	.0000 UG/L	1750	0.5	2012/05/29	3	108	2021/05	
S2 REGULATED SOC											
	77443	1,2,3-TRICHLOROPROPANE (1,2,3-TCP)	<	ND UG/L	0.005	0.005	2018/10/10	4	108	2027/10	
	39033	ATRAZINE	<	.0000 UG/L	1	.5	2014/07/30	3	108	2023/07	
	39055	SIMAZINE	<	.0000 UG/L	4	1	2014/07/30	3	108	2023/07	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO: 011

NAME: GOLDSIDE WELL 07

CLASS: CTGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - 011	HILLVIEW WATER CO-GOLDSIDE-HIL	011	GOLDSIDE WELL 07								
	GP SECONDARY/GP										
	00440 BICARBONATE ALKALINITY	120 MG/L	-----	-----	2018/09/18	4	36			2021/09	
	00916 CALCIUM	110 MG/L	-----	-----	2018/09/18	4	36			2021/09	
	00445 CARBONATE ALKALINITY	< ND MG/L	-----	-----	2018/09/18	4	36			2021/09	
	00940 CHLORIDE	380 MG/L	500	-----	2018/09/18	4	36			2021/09	
	00081 COLOR	< ND UNITS	15	-----	2018/09/18	4	36			2021/09	
	01042 COPPER	< ND UG/L	1000	50	2018/09/18	4	36			2021/09	
	38260 FOAMING AGENTS (MBAS)	< ND MG/L	.5	-----	2018/09/18	4	36			2021/09	
	00900 HARDNESS (TOTAL) AS CaCO3	300 MG/L	-----	-----	2018/09/18	4	36			2021/09	
	71830 HYDROXIDE ALKALINITY	< ND MG/L	-----	-----	2018/09/18	4	36			2021/09	
	01045 IRON	200 UG/L	300	100	2018/12/04	31	36			2021/12	
	00927 MAGNESIUM	7.3 MG/L	-----	-----	2018/09/18	4	36			2021/09	
	01055 MANGANESE	79 UG/L	50	20	2019/04/10	33	36			2022/04	
	00086 ODOR THRESHOLD @ 60 C	< ND TON	3	1	2018/09/18	4	36			2021/09	
	00403 PH, LABORATORY	7.6	-----	-----	2018/09/18	4	36			2021/09	
	01077 SILVER	< ND UG/L	100	10	2018/09/18	4	36			2021/09	
	00929 SODIUM	170 MG/L	-----	-----	2018/09/18	4	36			2021/09	
	00095 SPECIFIC CONDUCTANCE	1400 US	1600	-----	2018/09/18	7	36			2021/09	
	00945 SULFATE	24 MG/L	500	.5	2018/09/18	4	36			2021/09	
	70300 TOTAL DISSOLVED SOLIDS	920 MG/L	1000	-----	2018/09/18	4	36			2021/09	
	82079 TURBIDITY, LABORATORY	0.84 NTU	5	.1	2018/09/18	4	36			2021/09	
	01092 ZINC	460 UG/L	5000	50	2018/09/18	4	36			2021/09	
	IO INORGANIC										
	01105 ALUMINUM	< ND UG/L	1000	50	2018/09/18	4	36			2021/09	
	01097 ANTIMONY	< ND UG/L	6	6	2018/09/18	4	36			2021/09	
	01002 ARSENIC	3.0 UG/L	10	2	2018/09/18	6	36			2021/09	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO:

NAME: GOLDSIDE WELL 07

CLASS: CTGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MONTHS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - IO INORGANIC											
011											
	81855 ASBESTOS	ND	MFL	7	.2	2019/01/09	2	108		2028/01	
	01007 BARIUM	<	ND UG/L	1000	100	2018/09/18	4	36		2021/09	
	01012 BERYLLIUM	<	ND UG/L	4	1	2018/09/18	4	36		2021/09	
	01027 CADMIUM	<	ND UG/L	5	1	2018/09/18	4	36		2021/09	
	01034 CHROMIUM (TOTAL)	<	ND UG/L	50	10	2018/09/18	4	36		2021/09	
	00951 FLUORIDE (F) (NATURAL-SOURCE)	0.40	MG/L	2	.1	2018/09/18	4	36		2021/09	
	71900 MERCURY	<	ND UG/L	2	1	2018/09/18	4	36		2021/09	
	01067 NICKEL	<	ND UG/L	100	10	2018/09/18	4	36		2021/09	
	A-031 PERCHLORATE	<	ND UG/L	6	4	2017/09/05	4	36		2020/09	
	01147 SELENIUM	<	ND UG/L	50	5	2018/09/18	4	36		2021/09	
	01059 THALLIUM	<	ND UG/L	2	1	2018/09/18	4	36		2021/09	
NI NITRATE/NITRITE											
	00618 NITRATE (AS N)	<	ND mg/L	10	.4	2018/09/18	10	12		2019/09	
	00620 NITRITE (AS N)	<	ND mg/L	1	.4	2018/09/18	4	36		2021/09	
RA RADIOLOGICAL											
	01501 GROSS ALPHA	18.1	PCI/L	15	3	2017/03/28	8	36	M	2020/03	
S1 REGULATED VOC											
	34506 1,1,1-TRICHLOROETHANE	<	ND UG/L	200	.5	2018/07/25	6	72		2024/07	
	34516 1,1,2,2-TETRACHLOROETHANE	<	ND UG/L	1	.5	2018/07/25	6	72		2024/07	
	34511 1,1,2-TRICHLOROETHANE	<	ND UG/L	5	.5	2018/07/25	6	72		2024/07	
	34496 1,1-DICHLOROETHANE	<	ND UG/L	5	.5	2018/07/25	6	72		2024/07	
	34501 1,1-DICHLOROETHYLENE	<	ND UG/L	6	.5	2018/07/25	6	72		2024/07	
	34551 1,2,4-TRICHLOROBENZENE	<	ND UG/L	5	.5	2018/07/25	6	72		2024/07	
	34536 1,2-DICHLOROBENZENE	<	ND UG/L	600	.5	2018/07/25	6	72		2024/07	
	34531 1,2-DICHLOROETHANE	<	ND UG/L	.5	.5	2018/07/25	6	72		2024/07	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO:

NAME: GOLDSIDE WELL 07

CLASS: CTGD

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - S1 011	34541 1,2-DICHLOROPROPANE	<	ND UG/L	5	.5	2018/07/25	6	72		2024/07	
	34561 1,3-DICHLOROPROPENE (TOTAL)	<	ND UG/L	.5	.5	2018/07/25	6	72		2024/07	
	34571 1,4-DICHLOROBENZENE	<	ND UG/L	5	.5	2018/07/25	6	72		2024/07	
	34030 BENZENE	<	ND UG/L	1	.5	2018/07/25	6	72		2024/07	
	32102 CARBON TETRACHLORIDE	<	ND UG/L	.5	.5	2018/07/25	6	72		2024/07	
	77093 CIS-1,2-DICHLOROETHYLENE	<	ND UG/L	6	.5	2018/07/25	6	72		2024/07	
	34423 DICHLOROMETHANE	<	ND UG/L	5	.5	2018/07/25	6	72		2024/07	
	34371 ETHYL BENZENE	<	ND UG/L	300	.5	2018/07/25	6	72		2024/07	
	46491 METHYL-TERT-BUTYL-ETHER (MTBE)	<	ND UG/L	13	3	2018/07/25	8	72		2024/07	
	34301 MONOCHLOROBENZENE	<	ND UG/L	70	.5	2018/07/25	6	72		2024/07	
	77128 STYRENE	<	ND UG/L	100	.5	2018/07/25	6	72		2024/07	
	34475 TETRACHLOROETHYLENE	<	ND UG/L	5	.5	2018/07/25	6	72		2024/07	
	34010 TOLUENE	<	ND UG/L	150	.5	2018/07/25	6	72		2024/07	
	34546 TRANS-1,2-DICHLOROETHYLENE	<	ND UG/L	10	.5	2018/07/25	6	72		2024/07	
	39180 TRICHLOROETHYLENE	<	ND UG/L	5	.5	2018/07/25	6	72		2024/07	
	34488 TRICHLOROFLUOROMETHANE FREON 11	<	ND UG/L	150	5	2018/07/25	6	72		2024/07	
	81611 TRICHLOROTRIFLUOROETHANE (FREON 113)	<	ND UG/L	1200	10	2018/07/25	6	72		2024/07	
	39175 VINYL CHLORIDE	<	ND UG/L	.5	.5	2018/07/25	6	72		2024/07	
	81551 XYLENES (TOTAL)	<	ND UG/L	1750	0.5	2018/07/25	6	72		2024/07	
S2 REGULATED SOC											
	77443 1,2,3-TRICHLOROPROPANE (1,2,3-TCP)	<	ND UG/L	0.005	0.005	2018/10/10	4	72		2024/10	
	39033 ATRAZINE	<	ND UG/L	1	.5	2019/01/08	4	72		2025/01	
	39055 SIMAZINE	<	ND UG/L	4	1	2019/01/08	4	72		2025/01	

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO: 900

NAME: ST2DBP - GOLDSIDE RESERVOIR

CLASS: DBPA

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - 900	HILLVIEW WATER CO-GOLDSIDE-HIL	900	ST2DBP - GOLDSIDE RESERVOIR								
	D BP DISINFECTION BYPRODUCTS										
	32101 BROMODICHLOROMET HANE (THM)	<	ND UG/L	-----	1	2018/06/12	5	12		2019/06	DUE NOW
	32104 BROMOFORM (THM)		2.5 UG/L	-----	1	2018/06/12	5	12		2019/06	DUE NOW
	32106 CHLOROFORM (THM)	<	ND UG/L	-----	1	2018/06/12	5	12		2019/06	DUE NOW
	82721 DIBROMOACETIC ACID (DBAA)	<	ND UG/L	-----	1	2018/06/12	5	12		2019/06	DUE NOW
	32105 DIBROMOCHLOROMET HANE (THM)	<	ND UG/L	-----	1	2018/06/12	5	12		2019/06	DUE NOW
	77288 DICHLOROACETIC ACID (DCAA)	<	ND UG/L	-----	1	2018/06/12	5	12		2019/06	DUE NOW
	A-049 HALOACETIC ACIDS (5) (HAA5)	<	ND UG/L	60	-----	2018/06/12	5	12		2019/06	DUE NOW
	A-041 MONOBROMOACETIC ACID (MBAA)	<	ND UG/L	-----	1	2018/06/12	5	12		2019/06	DUE NOW
	A-042 MONOCHLOROACETIC ACID (MCAA)	<	ND UG/L	-----	2	2018/06/12	5	12		2019/06	DUE NOW
	82080 TOTAL TRIHALOMETHANES		3.3 UG/L	80	-----	2018/06/12	5	12		2019/06	DUE NOW
	82723 TRICHLOROACETIC ACID (TCAA)	<	ND UG/L	-----	1	2018/06/12	5	12		2019/06	DUE NOW

DATE: 7/31/2019

STATE OF CALIFORNIA

PAGE 25

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2010014

NAME: HILLVIEW WATER CO-GOLDSIDE-HIL

COUNTY: MADERA

SOURCE NO: 901

NAME: ASB-GRIFFIN & GOLDSIDE

CLASS: OTHR

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST RESULT	UNITS	MCL	DLR	LAST SAMPLE	COUNT	FREQ MON THS	MOD	NEXT SAMPLE DUE	NOTES
2010014 - 901	HILLVIEW WATER CO-GOLDSIDE-HIL	901	ASB-GRIFFIN & GOLDSIDE								
	IO INORGANIC										
	81855 ASBESTOS	ND MFL	7	.2		2017/08/15	1	108	M	2026/08	

Attachment C

Source Bacteriological Monitoring Report

Hillview Water Co.-Goldside

2010014

Source Monitoring Freq: 1/M

Sample Date	Time	Source	T Coli	E Coli	F Coli	HPC	Turbidity	Violation	Comment
11/3/2015		Wells: G2, G4, G6, G7	<1.1						
11/16/2015		Wells: H 1, MC 1, RC 1, RC 2	<1.1						
12/1/2015		Wells: H1, G2, G6, G7, G4, MC1, RC1, RC2	<1.1	A					
1/1/2016		Wells: G2, G6, G4, G7, MC1, RC 2, RC 1, H1	<1.1						
2/1/2016		Wells: MC1, H1, RC 1, RC 2, G 2, G4, G6, G7	<1.1						
3/1/2016		Wells: MC1, H1, G2, G6, G7, RC1, RC2	A	<1.1					
3/21/2016		Well G4	A	<1.1	<1.1				
4/1/2016		Wells: H1, MC1, RC1, RC2, G6, G7, G4, G2	<1.1	A					
5/1/2016		Wells: G2, G6, G7, RC1, RC2, MC1, H1	<1.1	A					
5/9/2016		Well G4	1.1	<1.1					
5/16/2016		Well G4	<1.1	A					Repeat
6/1/2016		Wells: H1, MC1, RC1, RC2, G6, G7, G4, G2	<1.1	<1.1					
7/1/2016		Wells: G2 G4 G6 G7 H1 MC1 RC1 RC2	<1.1	<1.1					
8/1/2016		Wells: G2, G4, G6, G7, H1, MC1, RC1, RC2	<1.1	<1.1					
9/1/2016		Wells: G2, G4, G6, G7, H1, MC1, RC1, RC2,	<1.1	<1.1					
9/21/2016		RC 1	1.1	<1.1					
10/1/2016		Wells: H1, MC1, RC1, RC2, H2, G6, G7	<1.1	<1.1					
10/19/2016		G4	1.1	<1.1					
11/1/2016		Wells: H1, MC1, RC1, RC2, G2, G6, G7	<1.1	<1.1					
11/9/2016		G4	<1.1	<1.1					
11/17/2016		G4	23	<1.1					
11/30/2016		G4	<1.1	<1.1					Repeat
12/7/2016		Wells: G2, G4, G6, G7	<1.1	<1.1					
12/21/2016		Wells: H1, MC1, RC1, RC2	<1.1	<1.1					
1/17/2017		Wells: H1, MC1, RC1, RC2, G7, G6, G4, G2	<1.1	<1.1					

31-Jul-19

Page 1 of 4

<i>Sample Date</i>	<i>Time</i>	<i>Source</i>	<i>T Coli</i>	<i>E Coli</i>	<i>F Coli</i>	<i>HPC</i>	<i>Turbidity</i>	<i>Violation</i>	<i>Comment</i>
2/1/2017		Wells: RC1, RC2, MC1, HV1, G2,4,6,7	<1.1	<1.1					
3/1/2017		Wells: H1,MC1, RC1, RC2, G2, G4, G6, G7	<1.1	<1.1					
4/1/2017		Wells: H1, RC1, RC2, MC1, G2, G4, G6, G7	<1.1	<1.1					
5/1/2017		Wells: RC2, RC1, MC1, HV1, G7, G6, G4, G2	<1.1	<1.1					
6/7/2017		Wells: HV1, RC1, RC2	<1.1	<1.1					
6/21/2017		Wells: G2, G4, G6, G7	<1.1	<1.1					
6/21/2017		Well MC1	1.1	<1.1					
7/12/2017		Wells: G7, G6, G4, G2	<1.1	<1.1					
7/26/2017		Wells: MC1, RC1, RC2, H1	<1.1	<1.1					
8/1/2017		Goldside 2, 4, 6, 7; River Creek 1, 2; Miami Creek 1; Hillview 1	<1.1	<1.1					
9/13/2017		Wells: RC 1, RC2, MC1, HV 1	<1.1	<1.1					
10/11/2017		Wells: 2, 4, 6, 7	<1.1	<1.1					
10/25/2017		Wells: Hillview 1, Miami creek 1, River creek 1, 2	<1.1	<1.1					
11/1/2017		Wells: Hillview 1, Miami Creek 1, River Creek 1, River Creek 2	<1.1	<1.1					
11/15/2017		Wells: Goldside 2, 4, 6	<1.1	<1.1					
12/6/2017		Wells: 2, 4, 6, 7	<1.1	<1.1					
12/20/2017		Wells: Hillveiw 1; MC 1; RC 1, 2	<1.1	<1.1					
1/10/2018		Wells: 2, 4, 6, 8	<1.1	<1.1					
1/24/2018		Wells: HV 1, MC 1, RC 1, RC 2	<1.1	<1.1					
2/7/2018		Wells: H1, MC1, RC1, RC2	<1.1	<1.1					
2/21/2018		Wells: G4, G6, G7	<1.1	<1.1					
3/7/2018		Wells: 4, 6, 7	<1.1	<1.1					
3/28/2018		Wells: HV 1, MC 1, RC 1, RC2	<1.1	<1.1					
4/11/2018		Wells: HV1, MC1, RC1, RC2	<1.1	<1.1					
4/25/2018		Wells: G4, G6, G7	<1.1	<1.1					
5/9/2018		Wells: HV 1, MC 1, RC 1, RC 2	<1.1	<1.1					
5/23/2018		Wells: G4, G6, G7	<1.1	<1.1					

31-Jul-19

Page 2 of 4

<i>Sample Date</i>	<i>Time</i>	<i>Source</i>	<i>T Coli</i>	<i>E Coli</i>	<i>F Coli</i>	<i>HPC</i>	<i>Turbidity</i>	<i>Violation</i>	<i>Comment</i>
6/6/2018		Goldside 4	<1.1	<1.1					
6/7/2018		Goldside 6, 7, Ditton 4	<1.1	<1.1					
6/20/2018		Wells: HV 1, MC 1, RC 1, RC 2, GS4, GS 6, GS 7	<1.1	<1.1					
7/11/2018		Wells: HV 1, MC 1, RC 1, RC2	<1	<1					
7/25/2018		Wells: Goldside 4, 6, 7	<1	<1					
8/1/2018		Wells: GS 4, 6, 7	<1	<1					
8/22/2018		Wells: HV1, MC1, RC1, RC2	<1	<1					
9/5/2018		Wells: G4, G6, G7, Ditton 4	<1	<1					
9/19/2018		Wells: RC1, RC2, MC1, HV1	<1	<1					
10/10/2018		Wells: HV1, MC1, RC1, RC2, GS6, GS7,	A						
11/7/2018		Wells: 4, 6, 7	<1	<1					
11/14/2018		Wells: HV 1, MC 1, RC 1, RC 2	<1	<1					
12/5/2018		Wells: HV1, MC1, RC1, RC2, GS4	<1	<1					
12/19/2018		Wells: GS6, GS7	<1	<1					
1/10/2019		Wells: HV 1, MC1, RC1, RC2	<1	<1					
2/6/2019		Wells: Goldside 4, 6, 7	<1	<1					
2/20/2019		Wells: Hilview 1, Miami Creek 1, Rivercreek 1, Rivercreek 2	<1	<1					
3/6/2019		Wells: HV1, MC1, RC1, RC2	<1	<1					
3/20/2019		Goldside 6 & 7	<1	<1					
3/20/2019		GS4	1	<1					
3/27/2019		GS4	<1	<1					
4/10/2019		Goldside 4, 6, 7	<1	<1					
4/24/2019		Wells: Hillview 1, Miami Creek 1, Miami Creek 2	<1.1	<1.1					
5/15/2019		Wells: RC 2, MC 1, HV 1	<1	<1					
5/22/2019		Wells: 4, 6, 7	<1	<1					
6/5/2019		Wells: MC 1, RC 1	<1	<1					
6/5/2019		HV 1	1	<1					
6/7/2019		HV1	<1	<1					

<i>Sample Date</i>	<i>Time</i>	<i>Source</i>	<i>T Coli</i>	<i>E Coli</i>	<i>F Coli</i>	<i>HPC</i>	<i>Turbidity</i>	<i>Violation</i>	<i>Comment</i>
6/24/2019		Wells: GS 4, 6, 7	<1	<1					

Attachment D

Distribution Bacteriological Monitoring Report

Bacteriological Distribution Monitoring Report

2010014 Hillview Water Co.-Goldside

Distribution System Freq: 4/M

<i>Sample Date</i>	<i>Location</i>	<i>T Coli</i>	<i>E Coli</i>	<i>F Coli</i>	<i>HPC</i>	<i>Type</i>	<i>Cl2</i>	<i>Violation</i>	<i>Comment</i>
1/1/2015	4 samples	<1.1				Routine	0.8-1		
2/1/2015	4 Samples	<1.1	A			Routine	0.7-1.2		
3/1/2015	4 samples	<1.1				Routine	0.2-1.0		
4/1/2015	4 samples	<1.1				Routine	0.8-1.2		
5/1/2015	4 Samples	<1.1				Routine	0.20-1.0		
6/1/2015	4 samples	<1.1				Routine	0.2-0.6		
7/1/2015	5 Samples	<1.0	<1.0			Routine	0.20-2.0		
8/1/2015	4 Samples	<1.0	<1.0			Routine	0.50-1.0		
8/5/2015	Goldside 4	<1.0	<1.0			Other			
9/1/2015	4 Samples	<1.0	<1.0			Routine	0.40-1.4		
9/23/2015	Site 3 Bathroom Sink	<1.1	A			Routine	2.0		Missing Samples
10/1/2015	4 samples	<1.0	<1.0			Routine	0.8-1.0		
11/3/2015	4 Samples	<1.1				Routine	0.8		
12/1/2015	4 Samples	<1.1				Routine	0.2-0.8		
1/4/2016	4 Samples	<1.1				Routine	0.60-0.80		
2/1/2016	4 Samples	<1.1				Routine	0.8-1.4		
3/1/2016	4 Samples	A	<1.1			Routine	0.8-1.2		
4/1/2016	4 Samples	<1.1	A			Routine	0.55-0.80		
5/1/2016	4 Samples	<1.1	A			Routine	0.2-1		
6/1/2016	4 Samples	<1.1	<1.1			Routine	0.6-0.7		
7/1/2016	4 Samples	<1.1	<1.1			Routine	0.6-1		
8/1/2016	4 Samples	<1.1	<1.1			Routine	0.8-1.2		
9/7/2016	4 Samples	<1.1	<1.1			Routine	0.7-0.8		
10/1/2016	4 samples	<1.1	<1.1			Routine	0.8-1.1		
11/1/2016	4 Samples	<1.1	<1.1			Routine	1.0-1.40		
12/1/2016	4 samples	<1.1	<1.1			Routine	0.9-1.5		
1/1/2017	4 samples	<1.1	<1.1			Routine	0.6-1.2		
2/1/2017	4 samples	<1.1	<1.1			Routine	.8-1.0		
3/1/2017	4 Samples	<1.1	<1.1			Routine	0.9-1.6		
4/1/2017	4 Samples	<1.1	<1.1			Routine	0.5-1.0		
5/1/2017	4 samples	<1.1	<1.1			Routine	.6-1.2		
6/1/2017	4 samples	<1.1	<1.1			Routine	.5-1.2		
7/1/2017	4 samples	<1.1	<1.1			Routine	0.2-2.0		
8/1/2017	4 samples	<1.1	<1.1			Routine	0.6-1.2		
9/13/2017	4 samples	<1.1	<1.1			Routine	0.8-1.0		
10/1/2017	4 samples	<1.1	<1.1			Routine	1.0-1.6		

Sample Date	Location	T Coli	E Coli	F Coli	HPC	Type	Cl2	Violation	Comment
11/1/2017	4 samples	<1.1	<1.1			Routine	1.2-1.6		
12/1/2017	4 samples	<1.1	<1.1			Routine	0.6-1.0		
1/24/2018	4 samples	<1.1	<1.1			Routine	0.8-2.0		
2/21/2018	4 samples	<1.1	<1.1			Routine	0.3-2.5		
3/1/2018	4 samples	<1.1	<1.1			Routine	1.2-1.6		
4/1/2018	4 samples	<1.1	<1.1			Routine	1.0-1.9		
5/9/2018	3 samples	<1.1	<1.1			Routine	1.2-2		
5/23/2018	2 samples	<1.1	<1.1			Routine	0.6-0.9		
6/1/2018	4 samples	<1.1	<1.1			Routine	0.5-2.2		
7/1/2018	4 samples	<1	<1			Routine	0.5-1.5		
8/1/2018	4 samples	<1	<1			Routine	0.9-1.3		
9/1/2018	5 samples	<1	<1			Routine	0.8-2.2		
10/1/2018	4 samples	<1	<1			Routine	0.6-1.5		
11/7/2018	5 samples	<1	<1			Routine	1.0-2.8		
12/1/2018	4 samples	<1	<1			Routine	0.8-1.0		
1/10/2019	2 samples	<1	<1			Routine	1.3		
2/2/2019	4 samples	<1	<1			Routine	0.8-1.6		
3/1/2019	4 samples	<1	<1			Routine	0.9-2.0		
4/1/2019	4 samples	<1	<1			Routine	0.9-1.8		
5/1/2019	4 samples	<1	<1			Routine	0.6-1.8		
6/1/2019	8 samples	<1	<1			Routine	0.6-2.0		
6/5/2019	Goldside Pressure	8.7	7.5			Routine	0.6		
6/5/2019	Griffin & Lot 102	4.2	4.2			Routine	0.6		

Violation Key

MCL	Exceeds the maximum contaminant level	MR4	Did not collect 5 routine samples for previous month's positive sample
MR1	No monthly sample for the report month	MR5	Incorrect number of repeat samples as follow-up to a positive sample
MR2	No quarterly sample for the report month	MR6	No source sample
MR3	Incorrect number of routine samples for the report month	MR7	No summary report submitted
		MR8	Other comments and/or info.

Attachment E
Lead and Copper Monitoring Report

Individual System Lead and Copper Rule Tracking Report

2010014

HILLVIEW WATER CO-GOLDSIDE-HIL

Pop: 924

Eng: BR

Lead Action Level: 0.015 mg/L

Copper Action Level: 1.3 mg/L

Sample Date Begin/(End)	Monitoring Period	Sample Set ID	Number Required	Number Sampled	Lead 90th % (mg/L)	Copper 90th % (mg/L)	Action Taken	Action Type	Next Due Date	Next Due Freq	Comments
(8/6/1993)	6M2ND-1993	1 st 6	20	20	0.0019	0.94			2/6/1994	2nd 6	
(4/25/1994)	6M1ST-1994	2nd 6	20	20	0.005	0.37			9/30/1995	A1	
(12/8/1994)	YR1994	A1	20	20	0.005	0.42				A2	
(12/9/1999)	YR1999	A2	20	20	0.008	0.420			9/30/2001	T1	
(9/28/2004)	3Y2002-2004	T1	10	10	<0.005	0.150			9/30/2007	T2	Data entered on 3/2005 by BJR. NOTE: 4 orig sites were replaced due to inconsistencies w/ prior results.
(10/31/2007)	3Y2005-2007	T2	10	10	0.008	0.174			9/30/2010	T3	Samples collected after due date. Citation issued. Results entered 1/29/08, BJR.
(12/31/2007)	YR2007						Cit	03-11-07C-030			Entered by WKK.
8/3/2010 (9/9/2010)	3Y2008-2010	T3	10	10	0.0078	0.123			9/30/2013	T4	entered by MRW 10-28-10.
9/11/2013 (9/13/2013)	3Y2011-2013	T4	10	10	0.0055	0.073			9/30/2016	T5	entered by MRW 11-12-13.
7/19/2016 (7/26/2016)	3Y2014-2016	T5	11	11	0.007	0.32			9/30/2019	T6	entered by MLM 8/24/2016

Legend:

Cit: Citation

EL: Enforcement letter

1st 6: 1st initial 6-mo. round of monitoring

2nd 6: 2nd initial 6-mo. round of monitoring

A1: 1st Annual monitoring

A2: 2nd Annual monitoring

T1: 1st Triennial (3 yr) monitoring

T2: 2nd Triennial (3 yr) monitoring

T3: 3rd Triennial (3 yr) monitoring

7/31/2019



State Water Resources Control Board

August 13, 2021

PWS No. 3410012

Audie Foster
Director of Northern Operations
California American Water Company
4701 Beloit Drive
Sacramento, CA 95838

2021 COMPLIANCE INSPECTION OF THE CALIFORNIA AMERICAN WATER COMPANY – ISLETON PUBLIC WATER SYSTEM (PWS NO. 3410012)

On July 27, 2021, Michael Tolin of the California State Water Resources Control Board Division of Drinking Water, accompanied by the California American Water Company (Cal Am) staff inspected the Cal Am – Isleton domestic water system (PWS No. 3410012).

Attached to this letter you will find a copy of the Compliance Inspection Report that documents inspection findings. **Please review the enclosed report and respond to the items listed in both the report and the Compliance Inspection Findings section (Appendix A) by the indicated response deadlines.**

If you have any questions, or if we can be of any assistance, please do not hesitate to contact Michael Tolin at (916) 552-9995, or by email at Michael.tolin@waterboards.ca.gov.

Sincerely,

Ali R. Rezvani, P.E.
Sacramento District Engineer
Division of Drinking Water
STATE WATER RESOURCES CONTROL BOARD

Enclosure,

cc: Michael Tolin, P.E. – Associate Sanitary Engineer, DDW, SWRCB
Bruce DeBerry; bruce.deberry@cpuc.ca.gov
James Booth (especially Class A utilities); james.booth@cpuc.ca.gov
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Public Advocate Office

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**State Water Resources Control Board
Division of Drinking Water
Compliance Inspection Report / Sanitary Survey**

Purveyor: California American Water Company – Isleton (Cal-Am Isleton) **System Number:** 3410012
Person(s) Contacted/Position: Victoria Kunda (Water Quality/Environmental Compliance Manager), Shilpa Singh (WQ/EC Specialist), Jared Bell (Chief Treatment Operator), Joshua Webster (Production Foreman)
Inspection Date(s): July 27, 2021
Reviewing Engineer: Michael Tolin, P.E. **District Engineer:** Ali Rezvani, P.E.
Last Inspection Date(s) and Reviewing Engineer: March 12, 2020, by Rachid Ait-Lasri, P.E.

EXECUTIVE SUMMARY

MCL Exceedances:

Has the water system had a water quality exceedance since the last inspection (Yes/No): No

Has the water system had an operational failure since the last inspection (Yes/No): No

If the water system had a water quality exceedance or an operational failure since the last inspection, has DDW issued enforcement actions (Yes/No): No

Enforcement Actions Since the Last Inspection:

Date	Number	Reason	Resolved (Yes/No)	Comments
n/a	n/a	n/a	n/a	n/a

Short discussion: N/A

Permit:

Is the water system permit up-to-date (Yes/No): Yes

Does the water system have pending permit or permit amendment(s) application with DDW (Yes/No): No

If the water system needs new permit(s) or permit amendment(s), has water system submitted an application to DDW (Yes/No): N/A

Pending Permits:

Application Date	Number	Type	Reason	Documents Received (Yes/No)	Comments
n/a	n/a	n/a	n/a	n/a	n/a

Short discussion: n/a

Improvements:

Does the water system have on-going or future planned improvement projects (Yes/No): No

If the water system has on-going or future planned improvement projects, will they need a permit from DDW (Yes/No): No

Improvement Plans:

Project Name	Permit Required (Yes/No)	Waiver Required (Yes/No)	Comments
n/a	n/a	n/a	n/a

Short discussion: N/A.

Noted Deficiencies:

Has the water system responded to previously noted deficiencies (Yes/No): Yes

Did the inspection reveal new deficiencies (Yes/No): Yes.

Short discussion: According to the 2020 electronic Annual Report, only 27 of the 30 cross-connection control devices were tested. All active cross-connection control devices shall be tested at least annually.

Recommendations and Important Issues:

Are there any recommendations or important issues (Yes/No): Yes.

Short discussion: According to the Operations staff, the tank overflow is missing lateral support and flexes significantly either when pushed by hand or by wind. Since the 200,000-gallon storage reservoir is glass lined, this lateral flexure may lead to damage to the glass-lining and/or the overflow anchorage. It is recommended that lateral bracing be installed to the tank overflow pipe.

A. INTRODUCTION

1. Permit Status (Date Issued/Amendment Purpose)

Full: Currently, the water system is operating under permit number 01-09-01-PER-008, issued on December 3, 2001. This permit is a transfer of title permit from Citizens Utilities Company of California to California American Water Company (Cal-Am).

Amendment(s): The water system permit includes the following amendments.

The first amendment is numbered 01-09-06-PER-006 and was issued on May 12, 2006, for change of 'gas chlorination' to 'sodium hypochlorite' disinfection method at all wells.

The second amendment is numbered 01-09-11-PER-002 and was issued on February 1, 2011, for addition of Well 3B (Source No. 3410012-005) as an approved water supply source, and addition of the 5th Street Water Treatment Plant (WTP) as an approved treatment plant to treat local groundwater from Well 3A (Source No. 3410012-004) and Well 3B (Source No. 3410012-005). This permit amendment also removed Well No. 1 (Source No. 3410012-001) from the permit. This well has been destroyed.

The third amendment is numbered 01-09-17-PER-016 and was issued on September 14, 2017, to consolidate the Isleton water system (CA3410012) and the Ox Bow Marina Water System (CA3400332) into the Isleton Water System (CA3410012) due to the change of ownership for the Ox Bow Marina water system to California American water, and change the status of the Main well (Source No. 3400332-001) and the Secondary Well (Source No. 3400392-002) to Stand-By.

The fourth amendment is numbered 01-09-19-PER-002 and was issued on March 5, 2019, to add a new 0.2-million-gallon water storage tank and booster pump station at the existing 5th Street Water Treatment Plant (5th Street WTP) site.

The 5th amendment is numbered 01-09-19-PER-007 and was issued on May 20, 2019, to change the status of the Ox Bow 2 well (Source No. 3410012-009) to "Inactive" and remove it from the list of approved potable sources.

Are the permit provisions complied with? The provisions of the permit and its amendments are complied with.

Is the permit up to date? The permit and its amendments are currently up to date.

List data sheets on file (permit, files, etc.) Data sheets were included as part of the permit and its respective amendments. The well data sheets are: Well No. 1 – Old No. 2 (destroyed), Well 02 – Standby, Well 3A - 5th Street, Well 3B - 5th Street, Ox Bow 1 (Standby) and Ox Bow 2 (Standby). Other data sheets on file include: Distribution data sheet, Chlorination data sheet, Reservoir data sheet, pumping station data sheet and the adsorptive media treatment data sheet.

Permit Conditions: The permit and its amendments have 59 active conditions.

Public Water System Classification: Cal-Am Isleton is classified as a "Community Water System (CWS)".

Table 1 - Permit Summary

Permit Number	Permit Type	Permit Date	Comments
None Assigned	Full	February 1969	Original permit issued to the Citizens Utility Company of California for operation of the existing water system. - No Conditions
01-09-01-PER-008	Full	12-03-2001	Transfer of ownership from Citizens Utility Company of California to California American Water Company. Water system operation under permit issued in February 1969. - Three conditions
01-09-06-PER-006	Amendment	05-12-2006	Change of disinfection method from gas chlorination to liquid chlorination. - One condition
01-09-11-PER-002	Amendment	02-01-2011	Use of Well 3B (Source No. 3410012-005) as an approved water supply well. Deactivate Well No. 1 (Source No. 3410012-001) 5 th Street WTP operation - Ten conditions
			Consolidate the Ox Bow Marina Water System (CA3400332) into the Isleton Water System (C43410012). Change the name, PS Code, and status of the Main well into Ox Bow 1 (Source No. 3400332-001 into Source No. 3400012-010) and the Secondary Well into Ox Bow 1 (Source No. 3400332-002 into Source No. 3400012-009). Both Ox Bow Marina water system wells have been converted to standby well sources. - 19 conditions
01-09-17-PER-016	Amendment	09-14-2017	
01-09-19-PER-002	Amendment	02-05-2019	Add a new 200,000-gallon water storage tank and booster pump station at the existing 5 th Street WTP site. - 21 conditions
01-09-19-PER-007	Amendment	05-20-2019	Change the status of the Ox Bow 2 well (Source No. 3410012-009) to "Inactive" and remove it from the list of approved potable sources in the Isleton water system. - Five conditions

2. Enforcement

California Health and Safety Code, Part 12, Chapter 4, Article 9: Remedies

Number of enforcements since last inspection: According to the existing records, no enforcement action was taken since the last inspection report.

3. System Changes

Changes since the last permit: Changed SCADA from radio to cellular phone communication.

Recently completed changes: The most recent changes include the following:

1. Changed SCADA from radio to cellular phone communication
2. _____

Planned future changes: Use Arsenic and Iron online analyzers (already installed). Replace the existing booster pump at the Elevated Tank with a larger pump.

Discussion and Appraisal: Most changes to the Isleton water system are planned and paced based on the Cal-Am finances and priorities.

4. Consumer and Production Data

Available historic data: Cal-Am Isleton historic data, including the number of service connections, population served, and water demand/production, are tabulated in Table 2.

Table 2 – Produced Water

Year	Service Connections			Pop. ^A	Water Production (MG)			Max. Daily Demand (MG) ^B	Peak Hourly Demand (gpm) ^B
	Metered	Flat Rate	Total		Max	Monthly Month	Total (year)		
2005	379	0	379	1,251	8.11	June	67.88	0.406	422
2006	367	0	367	1,211	7.47	August	58.36	0.361	377
2007	355	2	357	1,181	7.00	May	59.17	0.339	353
2008	388	2	390	1,287	8.16	September	70.46	0.408	425
2009	338	0	338	1,172	6.21	July	51.92	0.300	313
2010	380	0	380	1,254	5.82	July	46.33	0.282	293
2011	353	0	353	1,165	7.88	July	55.61	0.381	397
2012	391	0	391	1,172	4.99	June	43.01	0.250	260
2013	346	0	346	1,142	4.77	July	42.60	0.231	240
2014	371	0	371	954	3.99	July	38.42	0.193	201
2015	358	0	358	1,182	4.00	September	35.617	0.200	208
2016	357	0	357	1,178	3.897	August	35.861	0.189	196
2017	482	0	482	1,333	5.682	August	45.209	0.284	296
2018	476	0	476	1,571	5.512	July	49.549	0.267	278
2019	485	0	485	1,601	6.010	July	49.894	0.300 ^C	313
2020	480	0	480	1,581	6.615	July	60.268	0.530 ^C	552
Avg. ^D	410	-	410	1,288	5.33	-	45.60	0.200	294

Notes: A Population = 3.3 x Total Number of Service Connections
B Maximum Monthly Water Production Data used for MDD and PHD estimation (Section 64554)
C Maximum Daily Water Production Data actually measured for MDD and PHD estimation (Section 64554)
D MDD and PHD estimations are based upon an average 10-year (Section 64554)

Discussion and Appraisal: The Cal-Am Isleton water system serves a mix of residential and commercial service connections. All connections have been metered since 2003. The lower population value in 2014 was calculated by subtracting the number of commercial connections (82) from the total active connections (371) and multiplying by 3.3. Previous values likely included all of the commercial connections.

According to the submitted records, since 2005 the Maximum Daily Demand (MDD) of the water system ranged from 0.19 MG (2016) to 0.53 MG (2020). The maximum estimated MDD of 0.53 MG will be used to evaluate the source and storage capacity (see Section H).

For accurate evaluation of the water system capability to serve water to its customers, in addition to reporting the maximum amounts of water produced each month, it is recommended that California American Water Company maintains records of daily water use.

B. SOURCE DATA

California Code of Regulations, Title 22, Chapter 16, Article 3: Water Sources

1. Groundwater

The 5th Street WTP is supplied by two groundwater wells located at the treatment plant site: Well 3A and Well 3B. There is also a standby source (Well 02) located on H Street. Water quality monitoring of all sources indicated presence of arsenic above Maximum Contaminant Level (MCL) standards. Groundwater well information is tabulated in Table 3.

Table 3 – Groundwater Sources

Source Name* (Source Number)	Status**	Pressure (psi)***	Capacity (gpm)****	Comments/Deficiencies
Well 2 – Standby aka H Street Well (Source No. 3410012-003)	Standby	50 - 60	670	<ul style="list-style-type: none"> - 20-hp, oil-lubricated, turbine pump - 2,000-gallon pressure vessel (vertical) - Liquid sodium hypochlorite disinfection - Pump-to-waste through pressure vessel - Fe, Mn, As exceed MCL (no treatment)
Well 3A – 5 th Street (Source No. 3410012-004)	Active	60 - 85	525	<ul style="list-style-type: none"> - 60-hp, submersible turbine pump - Emergency natural gas electric generator - Emergency electrical power connection port - Pump-to-waste through pressure vessel - Pumps to the treatment plant - Arsenic exceeds MCL (on-site treatment)
Well 3B – 5 th Street (Source No. 3410012-005)	Active	60 - 85	525	<ul style="list-style-type: none"> - 50-hp, submersible turbine pump - Emergency natural gas electric generator - Emergency electrical power connection port - Pump-to-waste through pressure vessel - Pumps to the treatment plant - Mn, As exceed MCL (on-site treatment) - Not currently operated due to different water chemistry that requires different chemical dosages as compared to Well 3A.
Ox Bow 1 (Source No. 3410012-009)	Standby	60 - 85	294	<ul style="list-style-type: none"> - 10-hp, turbine pump - Well was offline at the time of the inspection (kept for emergencies) - Pump-to-waste through pressure vessel - Pumps to the system - Mn, As exceed MCL (no treatment)
Total Available Capacity:		1,050 gpm (active)		Total Capacity (2,014 gpm all wells)

- * Source numbers and names are based on WQI Data base
 ** Source status is based on WQI Data base
 *** Pressure range is reported operation pressure at well site
 **** Source capacity is reported at operation pressure. Source capacity at 30 psi will be higher

Discussion and Appraisal: Well No. 2 - Standby is the oldest source of the water system. Water from this well contains arsenic, iron, and manganese above their respective MCLs. This well is classified as a 'standby' source; therefore, the water system is allowed to use this source for no more than 15 days each year. Water from this well does not go through any treatment other than disinfection.

Well 3A - 5th Street is located at the 5th Street WTP. Water from this well contains arsenic above the MCL. The well also contains manganese at concentrations averaging 35 µg/L. Sodium hypochlorite, polymer, and ferric chloride are injected into the pipeline before water passes through a 5,000-gallon 'chemical reaction vessel'. After the chemical reaction vessel, the water enters the pressure filtration process. Operation of the well is controlled via the SCADA system based on system pressure and water storage tank levels.

Well 3B - 5th Street is also located at the 5th Street WTP. Water from this well also contains arsenic, iron, and manganese above their respective MCLs. Water produced by this well is piped to the chemical injection vault where sodium hypochlorite, polymer, and ferric chloride are injected into the pipeline before water passes through a 5,000-gallon 'chemical reaction vessel'. After the chemical reaction vessel, the water enters the pressure filtration process. Operation of the well is controlled via SCADA and based on system pressure and storage tank levels. Well 3B is not being used currently, as its water chemistry is different from that of Well 3A, and Cal-Am is trying to determine the correct chemical dosages for arsenic, iron and manganese removal.

Ox Bow 1 well (permitted as a standby source) was offline during the inspection.

Raw water sampling taps for all wells are in accordance to Section 64560(c)(2)(E) of the regulations.

All wellheads meet the minimum 18-inch elevation above the surrounding grade. Pursuant to Section 64560(c)(3)(C), the Cal-Am Isleton water system wells are properly maintained in general.

There are two electric generators powered by natural gas: one at the 5th Street WTP, and one at the elevated water storage tank site. Reportedly, water system operators start and run the generators at least once a month to ensure proper operation during emergencies.

2. Surface Water None.

3. Emergency Interties None.

C. TREATMENT

1. Fluoride

There is no adjustment of fluoride levels prior to distribution and use.

2. Disinfection

Process Description: Cal-Am Isleton disinfects the local groundwater before distribution and use. The disinfection treatment process is achieved by injection of 12.5% sodium hypochlorite solution (NaOCl). NaOCl is injected along with ferric chloride and polymer before water enters a 5,000-gallon chemical reaction vessel. Mixing is achieved inline via a static mixer. Reportedly, bulk disinfection chemical deliveries follow Cal-Am chemical receiving Standard Operating Procedures (SOP).

Continuous disinfection provided: ☒ Yes ☐ No ☐ Unknown
Provisions for emergency chlorination provided: ☒ Yes ☐ No ☐ Unknown

Description of treatment records: Daily records are maintained at the 5th Street WTP, logged into smartphones, and transferred to the main office file server. Summary of disinfection treatment is tabulated in Table 4.

Table 4 - Disinfection System Chemical Information

Chemicals	Distributor	ANSI/ NSF 60 Certified	Injection Points	Target Residual	Mixing provided
Sodium Hypochlorite (12.5%)	Sierra Chemical/ Thatcher	Yes	Treatment Plant	0.7 mg/L	In-line

Discussion and Appraisal: The disinfection treatment system is in accordance with DDW requirements. According to the submitted documents, the local groundwater is disinfected at one location. Chlorination takes place before water enters the treatment plant chemical reaction vessel. After filtration (arsenic removal treatment), the finished water chlorine concentration is monitored. Based on the chlorine residual of the finished water, the chlorination is adjusted to ensure minimum residual in the distribution grid.

Water produced by Well No. 02 - Standby is disinfected using the same chemical. Disinfection treatment takes place at the wellhead before water enters the pressure vessel.

3. Inorganic Chemicals (Iron, Manganese, and Arsenic)

5th Street Water Treatment Plant (5th Street WTP)

i. General Information

Treatment plant classification: T2 Classification Date: May 29, 2018

Treatment method: Dissolved arsenic is removed via chemical oxidation using ferric chloride, physical coagulation using polymer, and multi-media pressure filters (greensand, anthracite, and gravel).

Treatment plant process diagram on file: ☒ Yes ☐ No ☐ Unknown

Treatment plant data sheets on file: ☒ Yes ☐ No ☐ Unknown

Discussion and Appraisal: Construction of the 5th Street WTP was completed in 2007. The sludge dewatering system was decommissioned in 2017, and since then Cal-Am uses SRCSD permit WTP021 to discharge backwash tank wastewater to the sewer without additional treatment.

ii. Source water

Raw Water Source: Raw water sources that are treated are Well 3A and Well 3B.

Source Capacity: The combined source capacity of the aforementioned wells is approximately 1,050 gpm (1.5 MGD). However, the treatment plant capacity is only 525 gpm.

Significant sewage hazards: General sewage hazards within the Drinking Water Source Assessment and Protection (DWSAP) analyses' Zone A are associated with nearby municipal sanitary sewers. No known septic systems are within 100 feet of any of the wells. According to the submitted well data sheets and well driller's logs, all wells have annular sanitary seals that extend at least 50 feet below ground level.

Significant Location / Recreation: The 5th Street WTP is within Isleton, south of Sacramento River.

Significant changes (e.g. activities on the watershed since the last inspection and/or changes in raw water quality, such as, turbidity or coliform levels): None

Discussion and Appraisal: The 5th Street WTP sources are subject to sanitary hazards typically associated with urban and rural areas. The wells are located near public road and surrounded by a small community south of the Sacramento River. The wells are located in areas near Delta levees and reportedly in areas that have been flooded in the past. There are no significant recreational activities near the well site other than boating and fishing in the Sacramento River. The nearby activities have not shown adverse effect on the groundwater source. The DWSAP program has identified flooding hazards and residential sewer collection systems as the most significant hazards. No new hazards were found during the inspection.

iii. Treatment Process and Operations

General treatment process description: The 5th Street WTP is designed to disinfect the water, oxidize natural occurring arsenic, and filter the water produced by Well 3A and Well 3B. During this process any other constituent (such as iron and manganese) that may oxidize may also be removed by the treatment process/system. It reportedly runs approximately 3 to 5 hours per day during normal operation and 7 to 9 hours per day in the summer for peak demands.

Sodium hypochlorite, ferric chloride, and polymer are injected into the water stream in a vault. Thereafter, chemically treated water enters a 5,000-gallon 'reaction vessels' (pneumatic tank) where the oxidation process takes place. Once the chemical reaction is complete, water is filtered using three pressure filtration units. In addition to the treatment vessels, there is one 50,000-gallon backwash wastewater holding tank. Finished water is delivered to the finished water storage tank, which provides static pressure to the distribution system. Tank level controls submersible well pump, turning on at 16.5 ft. and off at 29 ft.

Chemical oxidation treatment train: Sodium hypochlorite (12.5% solution), polymer, and ferric chloride (43% solution) are injected inline upstream of a static mixer and the reaction vessel. The capacity of reaction vessel is approximately 5,000 gallons and reportedly has no air injected. Based on the influent flow from Well 3A or Well 3B, the detention time in the reaction vessel is approximately 9.5 minutes. Summary of the chemicals used is tabulated in Table 5.

Table 5 – Summary of chemicals Used at Island View Water Treatment Plant.

Chemicals	Manufacturer	ANSI/ NSF 60 Certified	Injection points	Mixing provided and Dosage
Sodium Hypochlorite (12.5%)	Sierra Chemical / Thatcher	Yes	Before reaction vessel	In-line and reaction vessel
Ferric Polymer (43% Neat Concentration)	Sierra Chemical / Thatcher	Yes	Before reaction vessel	In-line and reaction vessel
Polymer (Aries 2205)	Sierra Chemical / Thatcher	Yes	Before reaction vessel	In-line and reaction vessel
Sodium Hydroxide (25%, pH adjustment)	Sierra Chemical / Thatcher	Yes	After backwash	In-line and finished water storage - Currently not being used

Pressure filtration treatment train: After chemical injection and reaction vessels, the partially treated water enters one of the treatment plant pressure filters. Three pressure filters remove the oxidized inorganic chemicals out of the solution prior to distribution. Reportedly, each filter has approximately 78.5 square feet of surface area and the filter media consists of:

Greensand: 18-inch deep, effective size between 0.45 – 0.55 mm
Anthracite: 18-inch deep, effective size between 0.80 – 0.90 mm
Gravel: 3-inch deep, effective size between 1/8 – 1/4 inches
3-inch deep, effective size between 3/4 – 3/8 inches
6-inch deep, effective size between 1 1/2 – 3/4 inches

At maximum plant flow of 525 gpm, when two filters are in operation, theoretical filter loading rate would be approximately 3.34 gallons per minute per square foot (gpm/ft²). Normally, three filters are in operation. Since the maximum plant operation is limited to the maximum source water pump operation of 525 gpm (see Table 3), the filter loading rate while one of the filters is out of service for backwash would be approximately 3.34 gpm/ft². Reportedly, the filters were designed for maximum filtration rate of 6.7 gpm/ft². Filter flow is controlled via effluent filter flow valves.

Flow Control Method: Filter loading rate is controlled via 'effluent' valves installed on each filter cell.

Number of Redundant Filter Units: According to submitted documents, one filter unit is redundant (2 + 1). The spare filter vessel is brought into service when one of the other two filters is taken out of service for maintenance. However, during the inspection, all 3 filters were reportedly online.

pH Adjustment: Sodium hydroxide (25%) is added to increase pH from 7.7 to 8.2 to lower the potential of corrosion in the aging pipelines of the Cal-Am Isleton distribution system. pH is adjusted upward by about a half a point with sodium hydroxide injection. However, during the inspection, sodium hydroxide was not being used.

Standby power available: ☒ Yes ☐ No ☐ Unknown
Treatment plant meets appropriate design criteria: ☒ Yes ☐ No ☐ Unknown
Filter rates varied to meet system demand: ☒ Yes ☐ No ☐ Unknown
Filter-to-waste available: ☒ Yes ☐ No ☐ Unknown
Filters operated to minimize rapid startup/shutdown: ☒ Yes ☐ No ☐ Unknown

Operations and Maintenance Plan:

Copy reviewed by Division: ☒ Yes ☐ No ☐ Unknown
Plan acceptable: ☒ Yes ☐ No ☐ Unknown

Oxidation Chemical: 43% ferric chloride (neat concentration) (see Table 8)

Coagulation Agent Application Rate: Ferric chloride / polymer injection rate is adjusted to ensure complete oxidation of the arsenic. The polymer dose is reportedly at 2.5 mg/L during the inspection.

The 5th Street WTP is visited daily by a certified operator and dosages are monitored and adjusted as needed.

Operation and Maintenance plan: Water system Operations Plan is included in Appendix K of the 01-09-17-PER-016 Permit Amendment dated September 13, 2017. The Operation Plan has been reviewed and deemed acceptable.

Polymer coagulant: Aries 2205, a polymer coagulant chemical, is added to enhance filtration.

Treatment Plant Performance: Cal-Am submits monthly treatment records including lab results of raw and treated arsenic, manganese, and iron concentrations. Manganese concentrations range between 30 and 40 ppb most of the time, with rare exceedances of the secondary MCL of 50 ppb. Manganese is always non-detect in the treated effluent. Well 3A is the only well in operation at this time, as Cal-Am is trying to find the correct chemical dosages needed to treat raw water from Well 3B. Arsenic concentration in the treated water is usually 6 to 8 ppb, always below the MCL of 10 ppb.

Discussion and Appraisal: Based on the Permit Amendment No. 01-09-11-PER-002 Appendix F (groundwater treatment plant data sheet), the 5th Street WTP has been in operation since 2007, and it has not changed significantly since its construction. As reported in the last inspection Report, the backwash process has changed as described below. The treatment plant has been performing as designed.

iv. Backwash Operations

Backwash process description: To ensure optimum treatment, each filter is taken out of service for backwash once every 9 hours. The filter run time may be increased or reduced depending on finished water quality. During the backwash process, one filter is backwashed while the other two filters remain in service. The backwash filtration rate is approximately 15 gallons per minute per square feet (about 4.5 times the filtration rate) for approximately five minutes. Backwashed water is stored in a 50,000-gallon bolted steel tank. Recirculation pumps are available to recirculate or return the settled backwash wastewater to the filters. The settled water from backwash water tank is designed to return to the filter influent line before chemical injection. However, the backwash wastewater reclaim line that connects to the reaction vessel is not currently used. Decant from the backwash wastewater tank is directed to the sewer. The settled sludge is sent to a cone-bottomed tank and hauled offsite by truck.

Pressure filtration backwash procedure: Reportedly, the filters that are in service are backwashed sequentially. Backwash of each filter takes approximately 8 minutes. Total backwash cycle is approximately 30 minutes.

Prior to start of the backwash process, the backwash water storage tank is emptied until 6 feet or less of settled backwash water remains in the tank. The settled water is discharged into the local sewer.

Backwashing frequency and/or initiation requirements: The backwash frequency depends on the differential pressure of each filter cell and finished water quality. Each filter cell backwash cycle begins once the differential pressure of the cell reaches 10 psi or filter operation time reaches pre-determined hours of operation. At the time of the inspection backwash was set to occur after 9 hours of operation.

Backwash reclamation process description: Prior to the start of each backwash process, the settled water in the backwash water settling/recovery tank is pumped to the sewer. The settled water can also be pumped back to the headworks.

Backwash reclamation injection point: Reclaimed water may be injected into the treatment train prior to chemical injection. Settled water from the filtration backwash water tank can be pumped to the influent line using two 20-hp powered pumps.

Discussion and Appraisal: The 5th Street WTP backwash process is adequate. The reclaimed water is sent to the sewer instead of being returned to the WTP headworks. The backwash wastewater return to the headworks is currently not utilized.

v. Monitoring and Alarms

Alarm Testing Frequency: Table 6 summarizes the alarms and monitoring controls. Reportedly, all monitoring of the water treatment plant is connected to the Cal-Am central office SCADA system in Sacramento. Necessary grab samples are collected for the treatment plant performance evaluation.

Table 6 Monitoring and Alarms

Parameter	Location	Sample Frequency	Recording	Alarmed (yes/no)	Alarm Set point	Alarm Result
Flow	Each well	Continuous	Yes	Yes	Low (location-specific), 30-sec delay	Operator notification and shutdown
Pressure	Each well	Continuous	Yes	Yes	High and Low (location-specific), 60 sec delay	Operator notification and shutdown
Tank level	Storage tank	Continuous	Yes	Yes	High and Low, varies	Operator notification and shutdown
Cl ₂ Residual	Each well	Manual	No	No		
Depth to water	Each well	Manual	No	No		

Filter Inspection Frequency: Reportedly, water treatment operators visit the plant daily. Filter media inspections are performed once filters are taken out of service for routine maintenance.

Description of treatment records: Daily records are maintained at the treatment plant and recorded by the SCADA system. Some information is collected by operators and recorded. This information is submitted to the Cal-Am central office for review and filing.

In addition to scheduled inorganic monitoring, Cal-Am monitors arsenic levels of the treatment plant effluent on a weekly basis. Results are reported to DDW monthly. The reported analytical results show effective reduction of arsenic by the treatment plant. Since the last inspection there were no reported values exceeding the MCL for the finished water.

To ensure proper treatment, arsenic concentrations of the water produced by Well 3A - 5th Street and Well 3B - 5th Street are monitored at least quarterly. The last round of sampling for inorganic chemicals was collected in August 2018. The next round of inorganic chemicals monitoring is scheduled for August 2021.

vi. Overall Treatment Plant Appraisal

Continuous treatment provided: ☒ Yes ☐ No ☐ Unknown
Provisions for emergency Arsenic removal provided: ☐ Yes ☒ No ☐ Unknown

Discussion and Appraisal: The 5th Street WTP is well operated and maintained and had no MCL violation. The oxidation and filtration processes appear to be an effective treatment for removal of arsenic, iron, and manganese in the source water wells. Since the last inspection, the arsenic concentrations in all finished water samples were below the MCL, and the quarterly running annual average remained below the MCL.

D. RESERVOIRS AND STORAGE TANKS

California Code of Regulations, Title 22, Chapter 16, Article 6: Distribution Reservoirs

Reservoirs and Storage Tanks: Cal-Am Isleton currently has two storage tanks as shown in Table 7. The 5th Street Tank was permitted in March 2019.

Table 7 - Reservoir and Storage Tank Summary

Name (Latitude, Longitude)	Type	Capacity (gallons)	Comments
Isleton Elevated Tank (38.161968 , -121.608183)	Welded Steel	100,000	Did not climb during inspection. Last inspected on 6/13/2019.
5 th Street Tank (38.159263 , -121.610403)	Bolted Steel	200,000	Did not climb during inspection. Last inspected on 12/30/2019.

Total available storage: Cal-Am Isleton operates a 100,000-gallon elevated storage tank. The storage tank 'floats' on the distribution system. As treated water from the treatment plant or raw water from Well 02 - Standby is pumped into the distribution system, the storage tank is filled. According to submitted documents, the elevated tank has a common inlet and outlet – which results in the stored water to 'float' on the distribution system. This provides the water distribution system pressure.

In 2018-2019, Cal-Am constructed a 200,000-gallon storage tank and a booster pump station at the 5th Street WTP site. The tank and booster pump station were permitted in March 2019.

During emergencies when the treatment plant and Well 02 - Standby are not in operation, the water storage tanks can supply the water system for approximately 13.5 hours at the historic MDD of 0.53 MG (Table 3).

Well 02 - Standby is equipped with a pressure vessel. Due to the nature and purpose of pressure vessels, this volume may not be considered as water system storage capacity.

Discussion and Appraisal: The elevated tank was not inspected for safety reasons. Cal-Am shall visually inspect the tank at least annually. Cal-Am hired a tank inspection company to perform an evaluation on December 2, 2014. The conclusions from that report indicated that the exterior coating is in good condition and won't need recoating for 6-8 years. Interior surfaces had some severe corrosion and the consultant recommended recoating in the next 3 years if a cathodic protection system is not installed. The elevated tank was again inspected on April 9, 2019. Because the tank was in service, inspection of the tank's interior surface was not performed. But based on the previous inspection, several areas of the tank interior surface are severely corroded, and a full interior coating rehabilitation is required. No significant coating damage was noted on the tank exterior. A copy of the report was submitted to the Division. Both the tower ladder and tank shell ladder do not meet the current OSHA requirements. The inspections report lists several tank seismic enhancement recommendations as seismic code is not currently being met. Because of the repair costs involved, replacement of the tank is an option recommended in the report.

According to the Operations staff, the tank overflow is missing lateral support and flexes significantly either when pushed by hand or by wind. Since the 200,000-gallon storage reservoir is glass lined, this lateral flexure may lead to damage to the glass-lining and/or the overflow anchorage. It is recommended that lateral bracing be installed to the tank overflow pipe.

E. TRANSMISSION FACILITIES

California Code of Regulations, Title 22, Chapter 16, Article 4: Materials and Installation of Water Mains and Appurtenances

Description: The treatment plant and Well 02 - Standby discharge into the distribution system. The water system has one transmission main that connects with the Ox Bow Marina (1.5 miles of 12-inch welded HDPE pipe).

F. DISTRIBUTION SYSTEM

California Code of Regulations, Title 22, Chapter 16: California Waterworks Standards

1. Distribution System Information

Distribution system classification: According to Table 64413.3A and based on the population reported in the 2018 EAR, the Distribution system classification has been a "D2". The most recently reported population was 1,571.

Last Assessment Date: Based on the data contained in the Division's most recent water system permit amendment (01-09-19-PER-007).

Distribution system maps on file: ☒ Yes ☐ No ☐ Unknown
Distribution system data sheets on file: ☒ Yes ☐ No ☐ Unknown

2. Construction Practices

California Code of Regulations, Title 22, Chapter 16: California Waterworks Standards

Facilities constructed to meet Waterworks Standards: ☒ Yes ☐ No ☐ Unknown
Water/Sewer Separation Practices meet Waterworks Standards: ☒ Yes ☐ No ☐ Unknown
Lead pipes, joints, or solder used in the distribution system: ☐ Yes ☒ No ☐ Unknown

Discussion and Appraisal: Reportedly, Cal-Am Isleton follows appropriate AWWA standards when making repairs to their systems. No deficiencies regarding construction practices of the Cal-Am were found during the inspection.

3. Pressure Zones

Pressure Zones: Cal-Am – Isleton water distribution system has one pressure zone, as listed in Table 8.

Table 8 - Distribution Pressure Zones Summary

Pressure Zone Name	Pressure Range (psi)	Water Sources	Storage Capacity (gal)	Service Connections Served	Comments
Main and Ox Bow Marina	45-65	Treated groundwater	300,000	All	

Discussion and Appraisal: Isleton water system serves two small communities located in the southern part of Sacramento County in the Delta region of Sacramento River (the city of Isleton and Ox Bow Marina). The area is relatively flat with little varying elevations. Reportedly, the natural terrain of the area has an elevation that varies from 2 to -2 feet above mean sea level. The stored water that "floats" on the distribution system provides the distribution system pressure. The community and its water system are protected by the historic Delta levee system. The Delta levee system is considered to be vulnerable to climate change by the State Department of Water Resources.

4. BOOSTER PUMP AND PRESSURE REDUCING STATIONS

California Code of Regulations, Title 22, Chapter 16, Article 4: Pumping Stations

Booster Pump and Pressure reducing Stations: There is one booster pump station, at the 5th Street Treatment site, as described in Table 9.

Table 9 - Summary of Booster Stations

Station Name	Status	Capacity (gpm)	From Zone	To Zone	Number of Pumps	Comments
5 th Street Booster Pump Station	Active	2,800	Main	Ox Bow Marina	3	Permitted in March 2019.

Discussion and Appraisal: The 5th Street booster pump station was constructed in 2018-2019 and was permitted in March 2019.

5. Water Mains and Service Connections

California Code of Regulations, Title 22, Chapter 16, Article 4: Materials and Installation of Water Mains and Appurtenances

Water Mains and Service Connections: The distribution system piping material, size, amount, and condition are tabulated in Table 10 based on information provided by Cal-Am for this report.

Table 10 - Summary of Water Mains

Material	Size (in)	Amount (ft)	Amount (%)	Condition	Comments
PVC	4 – 12	12,209	34	Good	
AC	4 – 12	16,748	46.6		
CIP	4 – 12	5,438	15.2		

DIP	6 - 10	656	1.8		
Total	4 - 12	36,000	100		

AC Asbestos Cement
DIP Ductile Iron Pipe
CIP Cast Iron Pipe

Discussion and Appraisal: Based on the information tabulated in Table 12, the distribution system is in accordance to requirements specified in Section 64573 Article 4, Chapter 16, Division 4, Title 22 of California Code of Regulations.

G. WATER QUALITY AND MONITORING

1. Bacteriological Monitoring

California Code of Regulations, Title 22, Chapter 15, Article 3: Bacteriological Quality

Program Description: Based on population served (1,571) and number of service connections (476) and according to Table 64423-A of California Domestic Water Quality and Monitoring Regulation, Cal-Am is required to collect at least two (2) bacteriological water samples per month for the Isleton water system. According to the most recent permit amendment (01-09-19-PER-007), the Division directed Cal-Am to include an additional bacteriological monitoring sample to be collected in the Ox Bow Marina area. As a result, Cal-Am collects three monthly bacteriological samples per month.

The Cal-Am Isleton BSSP was submitted on April 26, 2018, and approved on July 11, 2018, and deemed to be acceptable. Summary and lab results are sent to DDW by the 10th of each month.

Bacteriological Sample Siting Plan (BSSP):

Copy received by DDW:

☒ Yes ☐ No ☐ Unknown

BSSP Approved:

☒ Yes ☐ No ☐ Unknown

Plan Date: December 19, 2018

Sampler: Routine bacteriological samples are collect and analyzed by California Laboratory Services.

Raw water sampling frequency: Cal-Am collects raw water samples from its wells once every calendar quarter.

Reports submitted late (after 10th of the month): All water sample analysis results are reported and submitted for Division review before the 10th of the following month.

MCL violations: There haven't been any bacteriological MCL violations since the last inspection.

Discussion and Appraisal: The Cal-Am Isleton bacteriological monitoring program is acceptable. No monitoring program deficiencies were noted during the inspection and file review. The water system shall revise the BSSP in accordance with the Revised Total Coliform Rule (rTCR) and submit a revised copy to the Division for review and approval. Any changes to the sampling program shall be preceded by a sample siting plan revision.

2. Chemical Monitoring (Source/Raw Water)

California Code of Regulations, Title 22, Chapter 15, Articles 4 through 17 inclusive: Inorganic Chemicals, Radioactivity, Organic Chemicals, Secondary Drinking Water Standards, et al.

Program Description: Cal-Am Isleton water quality is monitored according to the requirements of Title 22, Chapter 15, of the CCR. All chemical samples are collected by water treatment operators and delivered to the certified laboratory for analysis. A summary of monitoring results and frequencies is provided below. Per Section 64414, Well 2 and Ox Bow 1, which are standby wells, shall be monitored a minimum of once every compliance cycle for all inorganic, organic, and radiological MCLs

a. Inorganic Chemicals

Table 11 – Inorganic Chemical Monitoring Summary

Source	Frequency	Waivers	Last Monitoring Date	Next Monitoring Date	MCL Violations	Comments
Well 2	9 years	None	2/12/2021	2/2030	None	As =35 ug/L
Well 3A	3 years	None	8/14/2018	8/2021	None	As
Well 3B	3 years	None	8/14/2018	8/2021	None	As
Ox Bow 1	9 years	None	9/8/2014	9/2023	None	As =20 ug/L

Discussion and Appraisal: At the time of the inspection, the Cal-Am Isleton source water inorganic chemical source water monitoring was up to date. Other than arsenic in all wells, there haven't been any inorganic chemicals that exceed the MCL. The running annual average for Well 2 is 35 ug/L and the annual average for Ox Bow 1 is 20 ug/L. Both of these wells are standby sources.

b. Nitrate/Nitrite

Table 12 - Nitrates Chemical Monitoring Summary

Source	Frequency	Waivers	Last Monitoring Date	Next Monitoring Date	MCL Violations	Comments
Well 2	9 years	None	2/12/2021	8/2026	None	
Well 3A	Annual	None	8/18/2020	8/2021	None	
Well 3B	Annual	None	8/18/2020	8/2021	None	
Ox Bow 1	9 years	None	8/16/2018	8/2027	None	

Table 13 - Nitrite Chemical Monitoring Summary

Source	Frequency	Waivers	Last Monitoring Date	Next Monitoring Date	MCL Violations	Comments
Well 2	9 years	None	2/12/2021	2/2024	None	
Well 3A	3 years	None	8/14/2018	8/2021	None	
Well 3B	3 years	None	8/14/2018	8/2021	None	
Ox Bow 1	9 years	None	7/10/17	7/2026	None	

Discussion and Appraisal: Nitrate and Nitrite monitoring is up to date. There were no MCL exceedances. The next round of nitrate and nitrate monitoring should be collected as per Table 13 and Table 14.

c. Perchlorate monitoring

Table 14 – Perchlorate Monitoring Summary

Source	Frequency	Waivers	Last Monitoring Date	Next Monitoring Date	MCL Violations	Comments
Well 2	9 years	None	2/12/2021	2/2024	None	
Well 3A	3 years	None	8/14/18	8/2021	None	
Well 3B	3 years	None	8/14/18	8/2021	None	
Ox Bow 1	9 years	None	7/10/2017	7/2026	None	

Discussion and Appraisal: The monitoring is current. There were no MCL exceedances.

d. Secondary Drinking Water Standards

Table 15 - Secondary Drinking Water Standards Monitoring Summary

Source	Frequency	Waivers	Last Monitoring Date	Next Monitoring Date	MCL Violations	Comments
Well 2	9 years	None	2/12/2021	2/2024	Fe, Mn	Fe = 425 ug/L Mn = 132 ug/L
Well 3A	3 years	None	8/14/18	8/2021	None	
Well 3B	3 years	None	8/14/18	8/2021	None	
Ox Bow 1	9 years	None	7/10/2017	7/2026	None	

Discussion and Appraisal: At the time of the Inspection, the Cal-Am Isleton monitoring for secondary standards was up to date. Other than iron and manganese for Well 2 (standby), there have not been any chemicals with secondary MCLs that exceed its MCL. The running annual average for iron is 425 ug/L and the running annual average for Mn is 132 ug/L.

e. Radiological

Table 16 - Radiological Monitoring Summary

Source	Frequency	Waivers	Last Monitoring Date	Next Monitoring Date	MCL Violations	Comments
Well 2	9 years	None	2/10/2021	2/2030	None	
Well 3A	9 years	None	3/17/2021	3/2030	None	
Well 3B	9 years	None	3/17/2021	3/2030	None	
Ox Bow 1	9 years	None	8/16/2018	8/2027	None	

Discussion and Appraisal: Monitoring is current; no changes to the sample frequency of every 9 years for gross alpha per Section 64442(d)(4).

f. Regulated Volatile Organic Chemicals (VOCs)

Table 17 - Regulated VOCs Monitoring Summary

Source	Frequency	Waivers	Last Monitoring Date	Next Monitoring Date	MCL Violations	Comments
Well 2	9 years	None	2/18/2021	2/2030	None	
Well 3A	3 years	None	5/11/2021	5/2024	None	
Well 3B	3 years	None	5/11/2021	5/2024	None	
Ox Bow 1	9 years	None	5/11/2021	5/2030	None	

Discussion and Appraisal: At the time of the Inspection, the Cal-Am Isleton source water VOC monitoring was up to date.

g. Regulated Synthetic Organic Chemicals (SOCs)

Table 18 - Regulated SOC Monitoring Schedule

Source	Frequency	Waivers	Last Monitoring Date	Next Monitoring Date	MCL Violations	Comments
Well 2	9 years	None	2/12/2021	2/2030	None	
Well 3A	3 years	None	5/11/2021	5/2024	None	

Well 3B	3 years	None	5/11/2021	5/2024	None	
Ox Bow 1	9 years	None	8/16/2018	8/2027	None	

Discussion and Appraisal: At the time of the Inspection, the Cal-Am Isleton source water SOC monitoring was up to date.

3. Disinfection Byproduct Rule

California Code of Regulations, Title 22, Chapter 15.5: Disinfectant Residuals, Disinfection Byproducts, and Disinfection Byproducts Precursors

- Stage 1 D/DBP Rule:** Cal-Am Isleton is a Schedule 4 system and collected one sample per treatment plant per year; the system was in compliance regarding this monitoring and no MCL violations occurred.
- Stage 2 D/DBP Rule (Standard Monitoring):** Cal-Am Isleton collected one sample per treatment plant per year and was in compliance regarding this monitoring; no MCL violations occurred. Table 19 provides a summary of TTHM and HAA5 results.
- Stage 2 D/DBP Rule Compliance Monitoring:** Cal-Am Isleton is on a "Standard Monitoring" schedule. This is a "Schedule 4" system which requires 2 samples per year beginning in 2014 for routine monitoring (dual samples i.e. TTHM/HAA5 analyzed at each location). The second location added was at 33 4th Avenue; the locations are adequate. Compliance is determined by the Locational Running Annual Average (LRAA). Since 2018, one more location was added to represent the Ox Bow Marina in accordance with permit amendment no. 01-09-17 PER-016. The address is 164 Ox Bow Marina road. The next monitoring is due in May 2022.

Table 19 Summary of TTHM/HAA5 Monitoring Results

Date	No. of Samples	TTHM (ppb)	HAA5 (ppb)	Comments
MCL		80	60	
Reduced Monitoring Level		40	30	
8/21/08	1	33.9	6.8	725 Tyler Island Bridge Road
8/14/09	1	14.5	6.3	725 Tyler Island Bridge Road
8/18/10	1	17.7	4.5	725 Tyler Island Bridge Road
8/25/11	1	13.1	2.9	725 Tyler Island Bridge Road
8/9/12	1	15.3	8.6	725 Tyler Island Bridge Road
8/26/13	1	14.0	2.4	725 Tyler Island Bridge Road
5/14/14	2	14.6/12.1	4.6/3.8	616 Tyler Island Bridge Road 33 4th Avenue
5/13/15	2	14.8/20.3	3.4/2.9	616 Tyler Island Bridge Road 33 4th Avenue
5/9/16	2	14.1/14.1	1.1/1.3	616 Tyler Island Bridge Road 33 4th Avenue
5/8/17	2	32.8/20.5	33.8/5.9	616 Tyler Island Bridge Road 33 4th Avenue
5/8/18	3	11.8/11.3/8.4	5.3/5.4/3.6	616 Tyler Island Bridge Road 33 4th Avenue 164 Ox Bow Marina Road
5/8/19	3	8.2/11.2/10.4	3.2/1.0/4.5	616 Tyler Island Bridge Road 33 4th Avenue 164 Ox Bow Marina Road
5/5/20	3	6.8/8.3/8.5	0.0/3.2/2.2	1) 33 4th Avenue 2) 616 Tyler Island Bridge Road 3) 164 Ox Bow Marina Road

5/12/21	3	9.2/13.0/9.7	4.1/3.0/1.7	1) 33 4 th Avenue 2) 616 Tyler Island Bridge Road 3) 164 Ox Bow Marina Road
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- d. **Discussion and Appraisal:** The Company is on the "Standard Monitoring" schedule for Stage 2 Compliance Monitoring. The LRAA is below the MCL at all locations; all locations should continue to be sampled annually in May for TTHM and HAA5.

4. Lead and Copper Rule

California Code of Regulations, Title 22, Chapter 17.5: Lead and Copper

Program Description: Cal-Am Isleton collects distribution system lead and copper samples pursuant to California Code of Regulations Title 22, Chapter 17.5. Historic summary of all lead and copper monitoring is tabulated in Table 20.

Lead and Copper Sampling Plan:

Copy received by DDW: ☒ Yes ☐ No ☐ Unknown
Sampling plan acceptable: ☒ Yes ☐ No ☐ Unknown

Plan Date: Based on analyses results, request for reduced monitoring has been approved.

Population Served: 1,581 (based on the 2020 Annual Report) ('Small Water System' Pursuant to Section 64671.70)

Number of samples required: 20 (reduced to 10) (Table 64675-A)

Number of samples taken: 10 (reduced from 20)

90th Percentile Lead Action Level: 0.015 mg/L (15 ppb) (Section 64675.5 (a) (1))

90th Percentile Copper Action Level: 1.3 mg/L (1,300 ppb) (Section 64675.5 (a) (1))

Action Level Exceedances: None

Table 20 – Historic Lead and Copper Monitoring Summary

Round	Date	Sample Set	No. Samples Required / Collected	90% Lead (ppb)	90% Copper (ppb)
1	6/23/1993	1 st	20 / 19	2.5	130
2	11/9/1993	2 nd	20 / 18	6.5	170
3	9/1/1994	A1	10 / 12	ND	190
4	12/11/1998	T1	10 / 10	2.5	360
5	1/29/2002	T2	10 / 10	2.5	50
6	10/7/2004	T3	10 / 11	4.0	70
7	9/10/2007	T4	10 / 10	3.0	60
8	9/14/2010	T5	10 / 12	5.0	175
9	7/26/2013	T6	10 / 11	2.0	40
10	9/13/2016	T7	10 / 10	1.0	53
11	9/19/2017	1 st	10 / 16	ND	200
11	3/24/2018	2 nd	10 / 17	ND	185
12	Due 2021		At least 10		

Discussion and Appraisal: Cal-Am Isleton has conducted several rounds of Lead and Copper monitoring in accordance to the Federal and State requirements. Historically, there has been no violation. Based on the historic analyses results, the water system is on a 'reduced' monitoring schedule (once every three years monitoring of 10 sample sites). Ten samples should be collected between June 1 and September 30, 2021.

5. Consumer Confidence Report (CCR)

California Code of Regulations, Title 22, Chapter 15, Article 20: Consumer Confidence Report

Send Date/Anticipated Send Date: May 23, 2019 (for 2018 CCR)

Certification Form received: June 19, 2019 (for 2018 CCR)

Copy received by DDW: ☒ Yes ☐ No ☐ Unknown
Certification received by DDW: ☒ Yes ☐ No ☐ Unknown
Report contents acceptable: ☒ Yes ☐ No ☐ Unknown

Discussion and Appraisal: CCR reporting was completed as required.

H. WATERWORKS STANDARDS FOR SOURCE AND STORAGE CAPACITY

California Code of Regulations, Title 22, Chapter 16, Section 64554: New and Existing Source Capacity

The water system currently has a total of 300,000 gallons of storage. According to Section 64554 (a)(2), Article 2, Chapter 16 (California Water Works Standards), Division 4 of Title 22 California Code of Regulations, the necessary storage capacity of a public water system that serves less than 1,000 service connections shall be greater or equal to MDD, unless the system can demonstrate that it has an additional source of supply or has an emergency source connection that can meet the MDD requirement. Based on the highest MDD in the most recent 10 years of 0.53 MG (in 2020), the recommended storage volume for the water system is approximately 530,000 gallons. However, Cal-Am Isleton reportedly has approximately 2,014 gpm of available source capacity (2.9 MGD) that includes two standby wells (Well 2 and Ox Bow 1). Without the standby wells, the available source capacity is 1,050 gpm. Even with a single well in service (525 gpm or 0.756 MG), the MDD can be easily met. During a power outage, the onsite generator can be used to power one well pump to fill the storage tank, and then be used to run the booster pumps, thus still meeting the MDD.

I. OPERATION AND MAINTENANCE

1. Operator Certification

California Code of Regulations, Title 22, Chapter 13: Operator Certification

- a. **Treatment operator certification requirements:** Pursuant to Section 64413.1, Article 2, Chapter 15, Division 4, Title 22 of California Code of Regulations the treatment system of the Isleton water system has been classified as a "T2."

Chief Operator: T2 (Minimum) Name: Jared Bell (T3) exp 03/01/2023
Shift Operator: T1 (Minimum) Name: Joshua Webster (T3) exp 08/01/2024

- b. **Distribution operator certification requirements:** According to Table 64413.3-A of Section 64413.3, Article 2, Chapter 15, Division 4, Title 22 of California Code of Regulations, and based on the population served (1,571); the Isleton water distribution system is classified as "D2" distribution system.

Chief Operator: D2 (Minimum) Name: Kevin Flint (D3) exp 09/01/23
Shift Operator: D1 (Minimum) Name: Oscar Olivarez (D2) exp 06/01/2024

Discussion and Appraisal: A list of all Certified Distribution and Treatment Operators that work for Cal-Am Isleton in the Sacramento area and are responsible for operation of the Isleton water system is included in the 2020 Annual Report. Cal-Am Isleton has an appropriate number of certified operators necessary to meet operator certification requirements.

2. Cross-Connection Control Program

Program Description: Cal-Am Isleton used to participate in the Sacramento County Backflow Prevention Program. However, since January 2019, Cal-Am has its own cross-connection control program. Table 21 summarizes the number of backflow devices installed and tested each year.

Cross-connection control program coordinator: Hector Torres
Certification Number: AWWA 02916

Cross-connection control program

Program Date: Cal-Am has last updated their cross-connection control program on December 31, 2020

Copy received by DDW: ☒ Yes ☐ No ☐ Unknown
Program Acceptable: ☒ Yes ☐ No ☐ Unknown

Table 21 Summary of Backflow Inspections and Devices Installed

Year	Number in System	Number Installed	Number Tested	Number Failed	Number Repaired/ Replaced	Comments
2012	14	0	13	0	1	
2013	18	0	16	1	10	
2014	20	2	19	1	2	
2015	N/A	N/A	N/A	N/A	N/A	
2016	18	1	18	1	0	
2017	25	3	25	0	0	
2018	23	6	22	1	2	
2019	28	0	25	0	0	
2020	30	0	27	0	0	

Date of last cross-connection control survey: Cal-Am reported on the 2020 electronic annual report that the last cross-connection control survey for the Isleton Water System was completed on 12/31/2020.

Discussion and Appraisal: The above information is based on the respective Annual Reports. **According to the 2020 EAR, 27 of the total 30 cross-connection control devices were tested in 2020. All devices are required to be either tested, repaired, or have active enforcement actions (letters or disconnection).** Reportedly, Cal-Am actively tracks all Cal-Am Isleton backflow prevention devices.

3. Water System Problems

Table 22 Summary of Water System Problems

Type of Problem	No. of Problems	No. of Problems Investigated	No. of Problems Reported to the Division of Drinking Water or Local County Staff	Brief Description of Cause and Corrective Action Taken
Service Connection Breaks/ Leaks	5	5	0	Tree roots damage, saddle failure, or service line failure due to corrosion of bolts or strap failure. Replace and remove service saddle or service line to curb stop.
Main Breaks/Leaks	2	2	0	Pipes shear resulting in leak due to tree roots wrapping around main or water main is struck by equipment while digging, cut in a new section of pipe or repaired with full circle r
Boil Water Orders	0	0	0	
Total	7	7	0	

Discussion and Appraisal: Cal-Am reports that all water system breaks or leaks were repaired.

4. Customer Complaint Program

Program Description: Cal-Am Isleton personnel investigate all complaints as they are reported. Responses to the complaints vary based on investigation findings. Summary of consumer complaints, as reported in the 2020 Annual Report, is tabulated in Table 23.

Table 23 - Summary of Customer Complaints (Based on 2020 Annual Report)

Type	Number	Number Reported to DDW or Local County	Comments
Taste and Odor	0	0	
Color	0	0	
Turbidity	0	0	
Worms and Other Visible Organisms	0	0	
Pressure	0	0	
Illness	0	0	
Other	1	0	Water Quality information request
Total	1	0	

Discussion and Appraisal: Cal-Am reports that service personnel are dispatched to investigate complaints and they were resolved.

5. Emergency Response Program

a. Emergency Notification Plan (ENP):

Plan Date: February 19, 2018

Copy received by DDW:

☒ Yes

☐ No

☐ Unknown

ENP Acceptable:

☒ Yes

☐ No

☐ Unknown

☐ Need Updating

b. Emergency Response Plan (ERP):

Plan Date: 10/26/2020

Copy received by DDW:

☒ Yes

☐ No

☐ Unknown

ERP Acceptable:

☒ Yes

☐ No

☐ Unknown

☐ Need Updating

Discussion and Appraisal: The California American Water Company – Isleton water system Emergency Notification is up to date and acceptable and Emergency Response plan is up to date and acceptable.

6. Water Main Disinfection Program

California Code of Regulations, Title 22, Chapter 16, Article 5: Disinfection Requirements

Program Description: Based on field discussions, Cal-Am Isleton reportedly disinfects its newly installed and other repaired/exposed mains using methods that conform to AWWA Standard C651-92.

7. Valve Maintenance Program

California Code of Regulations, Title 22, Chapter 16, Article 4: Materials and Installation of Water Mains and Appurtenances

Program Description: Cal-Am Isleton reports that it has implemented a valve maintenance program as a component of its overall maintenance plan. Cal-Am has instituted a valve-exercising program, which includes the location of unmarked valves and the repair of valves that have been found defective.

Approximate number of valves: 314

Size Range of the valves: 2-inch to 12-inch

Number of Valves Exercised in 2017: 9

Adequacy of valve locations: The valve locations appear to be adequate.

Valve exercising frequency: Reportedly, system operators exercise all valves on a five to seven-year maintenance schedule. All valves were reportedly exercised in 2017, while only one in 2018, none in 2019, and 9 were exercised in 2020.

Discussion and Appraisal: The 2020 electronic Annual Report template includes provisions for entering the valve maintenance program. A valve maintenance program has been put in place. According to the operators, there have not been any problems with the distribution system valves.

8. Distribution System Flushing Program

California Code of Regulations, Title 22, Chapter 16, Article 4: Materials and Installation of Water Mains and Appurtenances

Program Description: Cal-Am Isleton reports that it flushes the system as needed. Cal-Am Isleton has developed a directional flushing plan and distribution system flushing program to address water quality concerns in various locations.

Approximate number of dead ends: Reportedly, there are 19 dead-ends within the distribution system and all of the dead-ends are equipped with flushing valves.

Percent with flushing valves: As discussed during inspection and reportedly, Cal-Am Isleton has a routine flushing program (100%).

Discussion and Appraisal: The 2020 electronic Annual Report template includes provisions for entering the dead-end flushing program. According to the 2020 EAR, there are 16 dead-ends in the system and all of them are equipped with blow-offs. In addition, the Cal-Am Isleton operation personnel flush lines as necessary. This is primarily determined by water quality sampling results, damaged pipes, and water quality complaints.

9. CLIMATE CHANGE VULNERABILITY ASSESSMENT

a. Fire:

Is Defensive Space of 100-feet (California Public Resources Code 4291) maintained around all structures owned, operated, and managed by the Community Water System?

Discussion and Appraisal: California Public Resources Code 4291 applies to properties that are "upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material". Fire is not a concern to the Water System. The Water System is not within forested area.

b. Flooding:

Has the water system had a history of flooding? Yes ☒ No

Are any of the drinking water facilities owned, operated, and managed by the Community Water System vulnerable to flooding? ☒ Yes ☐ No

Discussion and Appraisal: Facilities, per the Department of Water Resources Best Available Flood Maps online tool, are within a 100-year flood risk area, and area does not have interior levee. Therefore, if Isleton floods, the whole service area will flood and the water system will be out of operation. The City will have been evacuated per FEMA and the Sheriff Department. If that happens, there won't be any customers as the power will be out (underground) and the buildings will all be tagged as uninhabitable by the County.

c. Drought:

Has the water system had any history of drought related shortages and/or outages? Yes ☒ No
Is water system prepared for drought related shortages or outages? (Interties, backup supply, increased storage, etc.)

Discussion and Appraisal: Drought is not a concern to the Water System based on the 2020 electronic annual water report. The system's drought plan has 5 water shortage response stages.

d. Backup Power

Is backup power available via portable generators or permanent generators? ☒ Yes ☐ No

Discussion and Appraisal: the Water System's power supplier is PG&E. During an emergency, the onsite generator can power one well pump or the booster pumps.

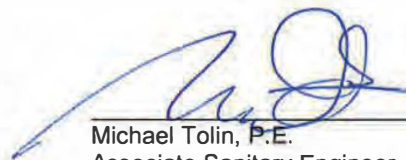
J. OVERALL SYSTEM APPRAISAL

The Cal-Am Isleton is generally well operated and maintained. According to the Operations staff, the tank overflow is missing lateral support and flexes significantly either when pushed by hand or by wind. Since the 200,000-gallon storage reservoir is glass lined, this lateral flexure may lead to damage to the glass-lining and/or the overflow anchorage. It is recommended that lateral bracing be installed to the tank overflow pipe. A summary table of deficiencies found during the inspection is provided in Appendix A.

K. APPENDICES

Appendix A Compliance Inspection Findings

Report Prepared By:



Michael Tolin, P.E.
Associate Sanitary Engineer
Division of Drinking Water, Sacramento, CA

8/13/2021
Date

APPENDIX A – COMPLIANCE INSPECTION FINDINGS

Public Water System Name: California American Water Company – Isleton Water System

Public Water System Number: 3410012

Item No.	Date Noted	Description of Defect or Hazard	Order	Response Deadline
GENERAL				
1	7/27/2021	According to the 2020 EAR, 27 of the total 30 cross-connection control devices were tested in 2020. All devices are required to be either tested, repaired, or have active enforcement actions (letters or disconnection).	B	
OPERATIONS				
2	7/27/2021	The water system shall review and submit a revised BSSP in accordance with the rTCR rule.	E	10/1/2021

Order of Hazard:

- A. Critical Health Hazard - Action must be taken immediately
- B. Serious Health Hazard - Action must be taken as soon as possible
- C. Potential Health Hazard - Must be corrected by specified deadline
- D. System or operational defect resulting in poor waterworks practice
- E. Other Deficiency – Nonhazardous



State Water Resources Control Board

December 16, 2021

PWS No. 3410013

Audie Foster
Director of Northern Operations
California American Water Company
4701 Beloit Drive
Sacramento, CA 95838

2021 COMPLIANCE INSPECTION OF THE CALIFORNIA AMERICAN WATER COMPANY – LINCOLN OAKS PUBLIC WATER SYSTEM (PWS NO. 3410013)

On October 6, 2021, Bryan Rinde of the California State Water Resources Control Board Division of Drinking Water, accompanied by the California American Water Company (Cal Am) staff inspected the Cal Am – Lincoln Oaks domestic water system (PWS No. 3410013).

Attached to this letter you will find a copy of the Compliance Inspection Report that documents inspection findings. **Please review the enclosed report and respond to the items listed in both the report and the Compliance Inspection Findings section (Appendix A) by the indicated response deadlines.**

If you have any questions, or if we can be of any assistance, please do not hesitate to contact Bryan Rinde by email at: Bryan.rinde@waterboards.ca.gov or via telephone at (916) 449-5666.

Sincerely,

Ali R. Rezvani, P.E.
Sacramento District Engineer
Division of Drinking Water
STATE WATER RESOURCES CONTROL BOARD

cc. Bryan Rinde, P. E. – Water Resource Control Engineer, DDW, SWRCB
Bruce DeBerry; bruce.deberry@cpuc.ca.gov
James Booth; james.booth@cpuc.ca.gov
Moises Chavez; moises.chavez@cpuc.ca.gov

Public Advocate Office
Richard Rauschmeier; Richard.Rauschmeier@cpuc.ca.gov
DRAWaterAL@cpuc.ca.gov

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

1001 I Street, Sacramento, CA 95814 | Mailing Address: P.O. Box 100, Sacramento, CA 95812-0100 | www.waterboards.ca.gov

**State Water Resource Control Board
Division of Drinking Water
Compliance Inspection Report**

Water System: California American Water Company – Lincoln Oaks System Number: 3410013
Person(s) Contacted/Position: Victoria Kunda – Manager, Water Quality/Environmental Compliance, Daniel Trush (Production Foreman)
Inspection Date(s): October 6, 2021
Reviewing Engineer: Bryan Rinde, P.E.
District Engineer: Ali R. Rezvani, P.E.
Last Inspection Date(s) and Reviewing Engineer: June 18 & 19, 2020 by Salvador Turrubiarres, P.E..

EXECUTIVE SUMMARY

MCL Exceedances:

Has the water system had a water quality exceedance since the last inspection (Yes/No): No
Has the water system had an operational failure since the last inspection (Yes/No): No
If the water system had a water quality exceedance or an operational failure since the last inspection, has DDW issued enforcement actions (Yes/No): No

Enforcement Actions Since the Last Inspection: None

Permit:

Is the water system permit up to date (Yes/No): Yes
Does the water system have pending permit or permit amendment(s) application with DDW (Yes/No): Yes
– 2014 permit application submitted for permit new Daly well, remove destroyed Kittery and Pine Creek Way wells, addition of the GAC treatment unit at the Summerplace well.
If the water system needs new permit(s) or permit amendment(s), has water system submitted an application to DDW (Yes/No): N/A

Improvements:

Does the water system have on-going or future planned improvement projects (Yes/No): No
If the water system has on-going or future planned improvement projects, do they need a permit from DDW (Yes/No): No

Noted Deficiencies:

Has the water system responded to previously noted deficiencies (Yes/No): Yes
Did the inspection reveal new deficiencies (Yes/No): No
Are there any recommendations or important issues (Yes/No): No

A. INTRODUCTION

1. Permit Status (Date Issued/Amendment Purpose)

Description: Initial permit 01-90-005 was issued on October 12, 1990. Amendments are listed in Table 1 below.

Public Water System Classification: Community Water System (serves greater than 25 persons for more than six months of the year, also more than 15 service connections)

Table 1 - Permit Summary

Permit Number	Permit Type	Permit Date	Comments
01-90-005	Initial	10/12/1990	- Permit 24 wells and chlorination treatment.
01-09-01-PER-009	Amendment	12/3/2001	- Permit change of ownership from Citizens Utility Companies of California to California American Water Company
01-09-05-PER-019	Amendment	12/9/2005	- Permit Sacramento Suburban Water District (SSWD) as an source of supply.
01-09-06-PER-007	Amendment	5/12/2006	- Permit disinfectant chemical from chlorine gas to sodium hypochlorite.
01-09-07-PER-008	Amendment	7/30/2007	- Permit Roseville Road 2.0 MG Tank
01-09-10-PER-003	Amendment	7/29/2010	- Permit granular activated carbon treatment for tetrachloroethylene (PCE) removal at Oak Forrest and Treelark Wells
	Pending application	6/30/2014	- Permit Daly well site as an approved source, removal of the destroyed Kittery and Pine Creek Way wells, addition of the GAC treatment unit at the Summerplace well.
CA3410013-2017PA-Schools	Amendment	1/19/2017	- Requirements for lead testing in schools
01-09-18-PER-027	Amendment	11/27/2018	- Permit Diablo Road Well (3410013-007) from "Active" to "Standby".
01-09-20-PER-019	Amendment	10/19/2020	- Permit 1.5 million gallon storage tank

Table 2 – Permit Conditions

Permit	#	Condition
01-90-005	1	Notwithstanding the provisions and requirements of this permit, CUCC must comply with all laws and Regulations applicable to the utility.
01-90-005	2	The permittee shall comply with provisions of Title 17, Part 1, Chapter 5, Subchapter 1, California Code of Regulations (CCR); which requires all water treatment operators to be certified by the Department.
01-90-005	3	The water supply system shall comply with all state laws applicable to public water systems, including but not limited to, Division 5, Part 1, Chapter 7, California Health and Safety Code and any regulations, standards, or orders adopted thereunder.
01-90-005	4	During the Sacramento Area Water Works Association's (SAWWA) 1989 sampling period the Glass Slipper (TCE), Sandalwood (PCE) and Treelark (PCE) wells tested positive for PCE or TCE. Because the concentrations of PCE and TCE were below the maximum contaminant level of 5.0 ug/l, CUCC was instructed to conduct quarterly sampling at these wells for a minimum of three years.
01-09-01-PER-009	1	Cal-Am shall comply with the provisions specified in Permit 01-90-005 issued to Citizens on October 12, 1990.

Permit	#	Condition												
01-09-01-PER-009	2	Cal-Am shall comply with the directives specified in the letter from the Department to Citizens dated June 5, 1998 for the Annual Inspection Report (conducted on January 29, 1998).												
01-09-05-PER-019	1	All monitoring results associated with the interconnection shall be reported to the Department via electronic data transfer. The source shall be referenced using the following PS Code: 3410031-037.												
01-09-05-PER-019	2	Cal Am shall operate the interconnection in a manner that conforms to the most recent operating criteria mutually agreed upon and stated in the attached Sacramento Suburban Water District Wholesale Water Supply Agreement with the California-American Water Company.												
01-09-05-PER-019	3	The Cal Am - Lincoln Oaks water system shall maintain enough source capacity directly controlled by Cal Am so that the system can be adequately supplied in the event that the interconnection capacity is reduced or lost.												
01-09-05-PER-019	4	Cal Am shall submit to the Department an Annual Report on the status and condition of the system as directed by the Department.												
01-09-06-PER-007	a	The Cal Am -Lincoln Oaks disinfection system shall be routinely inspected and the following records maintained: chlorine dose rate, free chlorine residual at the entry point to the distribution system, and well production readings.												
01-09-07-PER-008	a	A routine bacteriological monitoring site, located in the immediate vicinity of the storage tank, shall be added to Lincoln Oaks bacteriological sample siting plan (BSSP) as required under Title 22, Chapter 15, Section 64422 of the CCR. Alternatively, an existing monitoring site already listed in the BSSP may be relocated near the storage tank subject to CDPH approval.												
01-09-07-PER-008	b	Cal Am shall continue maintaining a detectable disinfectant residual at the booster station effluent during normal operations.												
01-09-07-PER-008	c	The onsite restroom facilities shall be routinely inspected for sewer backups and leaks. If either condition exists it shall be remedied immediately. An inspection record shall be made available to the CDPH for review.												
01-09-07-PER-008	d	All materials in contact with drinking water shall be tested and certified as meeting the specification of ANSI/NSF Standard 61. This requirement shall be met under testing conducted by a product certification organization accredited for this purpose by the American National Standards Institute.												
01-09-10-PER-003	a	GAC treatment is approved for use at the following sources. <table><tr><th>Source</th><th>Well</th><th>WTP Midpoint</th><th>WTP Effluent</th></tr><tr><td>Oak Forest Well</td><td>3410013-016</td><td>3410013-032</td><td>3410013-033</td></tr><tr><td>Treelark Well</td><td>3410013-022</td><td>3410013-034</td><td>3410013-035</td></tr></table>	Source	Well	WTP Midpoint	WTP Effluent	Oak Forest Well	3410013-016	3410013-032	3410013-033	Treelark Well	3410013-022	3410013-034	3410013-035
Source	Well	WTP Midpoint	WTP Effluent											
Oak Forest Well	3410013-016	3410013-032	3410013-033											
Treelark Well	3410013-022	3410013-034	3410013-035											
01-09-10-PER-003	b	Continuous disinfection shall be provided after treatment at each source listed in Condition (a). A minimum of 0.2 ppm free chlorine residual shall be maintained at each water treatment plant (hereinafter, WTP) effluent.												
01-09-10-PER-003	c	No changes, additions, or modifications shall be made to the sources or treatment listed in Conditions (a) and (b) unless a permit amendment is first obtained from the CDPH.												
01-09-10-PER-003	d	Pursuant to Title 22, Chapter 15, Section 64413.1, of the California Code of Regulations (hereinafter, CCR), the Oak Forest and Treelark WTPs are hereby classified as T2 and T2 treatment facilities respectively. All water treatment operators assigned to these facilities shall be certified pursuant to the requirements specified in Title 22, Chapter 15, Section 64413.5, of the CCR.												

Permit	#	Condition																																																												
01-09-10-PER-003	e	The Oak Forest and Treelark WTPs shall be operated under the following conditions: A. GAC treatment shall not be bypassed at any of the sources listed in Condition (a) The existing bypass piping shall be removed immediately. B. Both WTPs shall be operated in the lead-lag configuration. C. The WTPs shall not be operated in excess of their design capacities, specified at 1,000 gpm each. D. At minimum, the GAC media shall be replaced when either the midpoint tetrachloroethylene (hereinafter, PCE) concentration exceeds 5.0 ppb or the lag vessel experiences PCE breakthrough, whichever condition occurs first. The GAC media change out conditions and procedures shall be documented in the required operations plan. E. The parameters listed below shall be monitored at the specified locations and frequencies. A summary of the sampled parameters shall be reported to the CDPH monthly and shall be received by the 10th of the following month.																																																												
		<table><tr><th>Parameter</th><th>Sampling Location</th><th>Oak Forrest PS Code</th><th>Treelark PS Code</th><th>Frequency</th><th>Notes</th></tr><tr><td>Volatile organic chemicals</td><td>Well</td><td>3410001-016</td><td>3410001-022</td><td>Quarterly</td><td></td></tr><tr><td>Volatile organic chemicals</td><td>WTP midpoint</td><td>3410013-032</td><td>3410013-034</td><td>Monthly</td><td></td></tr><tr><td>Volatile organic chemicals</td><td>WTP effluent</td><td>3410013-033</td><td>3410013-035</td><td>Monthly</td><td></td></tr><tr><td>Nitrate</td><td>Well</td><td>3410001-016</td><td>3410001-022</td><td>Quarterly</td><td></td></tr><tr><td>Nitrate</td><td>WTP effluent</td><td>3410001-033</td><td>3410001-035</td><td>Monthly</td><td>First draw on startup</td></tr><tr><td>Well/WTP Production</td><td>Well</td><td>N/A</td><td>N/A</td><td>Monthly</td><td></td></tr><tr><td>Total coliform and E.coli</td><td>Well</td><td>N/A</td><td>N/A</td><td>Monthly</td><td></td></tr><tr><td>Total coliform and E.coli</td><td>WTP effluent</td><td>N/A</td><td>N/A</td><td>Monthly</td><td>Prior to chlorination</td></tr><tr><td>Chlorine residual</td><td>WTP effluent</td><td>N/A</td><td>N/A</td><td>Continuous</td><td></td></tr></table>	Parameter	Sampling Location	Oak Forrest PS Code	Treelark PS Code	Frequency	Notes	Volatile organic chemicals	Well	3410001-016	3410001-022	Quarterly		Volatile organic chemicals	WTP midpoint	3410013-032	3410013-034	Monthly		Volatile organic chemicals	WTP effluent	3410013-033	3410013-035	Monthly		Nitrate	Well	3410001-016	3410001-022	Quarterly		Nitrate	WTP effluent	3410001-033	3410001-035	Monthly	First draw on startup	Well/WTP Production	Well	N/A	N/A	Monthly		Total coliform and E.coli	Well	N/A	N/A	Monthly		Total coliform and E.coli	WTP effluent	N/A	N/A	Monthly	Prior to chlorination	Chlorine residual	WTP effluent	N/A	N/A	Continuous	
		Parameter	Sampling Location	Oak Forrest PS Code	Treelark PS Code	Frequency	Notes																																																							
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Chlorine residual	WTP effluent	N/A	N/A	Continuous																																																										
F. Reactivated GAC media used at the Oak Forest and Treelark WTPs shall be procured under the approved contract titled React and Return Carbon Program Agreement between California-American Water Company and Siemens Water Technologies Corp, dated April 1, 2008.																																																														
G. If the terms of the contract are significantly altered or if Cal Am wishes to use an alternate supplier of reactivated GAG media, a permit amendment shall be obtained prior to use.																																																														
H. If the contract stated in Condition (e)(6) is not renewed or is deemed null and void by either party, Cal Am shall only use ANSI/NSF Standard 61 certified virgin carbon at both WTPs.																																																														

Permit	#	Condition
01-09-10-PER-003	f	The Oak Forest and Treelark WTP operations plans shall be revised to incorporate the conditions specified in this permit amendment. The revised plan shall be submitted to the CDPH for approval no later than six months after the permit amendment is issued.
01-09-10-PER-003	g	The Oak Forest and Treelark GAG WTPs shall be operated in accordance with the most recent CDPH approved operations plan.
01-09-10-PER-003	h	The Summerplace GAG WTP shall remain bypassed unless a permit is obtained from the CDPH.
01-09-10-PER-003	i	The Summerplace well shall be monitored quarterly for volatile organic chemicals (hereinafter, VOC). Cal Am shall notify the CDPH when any PCE sample result exceeds a trigger level of 4.0 ppb. Cal Am must notify the CDPH of the trigger level exceedance within 30 days and increase the VOC monitoring frequency to monthly.
01-09-10-PER-003	j	Within 60 days of reaching the trigger concentration specified in Condition (i), Cal Am must submit a plan to prevent PCE from entering the distribution system at concentrations that exceed the MCL.
2017PA-SCHOOLS-3410013	1	This permit amendment applies to each public water system that serves drinking water to at least one or more of grades Kindergarten through 12th grade school for which a request for lead sampling has been made prior to November 1, 2019, as provided for in Provision 3.
2017PA-SCHOOLS-3410013	2	Each water system shall submit to the SWRCB's Division of Drinking Water (DOW) a comprehensive list of the names and addresses of all Kindergarten through 12th grade schools that are served water through a utility meter by July 1, 2017. The list shall be in the format and method posted on the DOW Lead Sampling in California Schools website.

Permit	#	Condition
2017PA-SCHOOLS-3410013	3	<p>If an authorized school representative, (the superintendent or designee of a school, governing board or designee of a charter school, or administrator or designee of a private school) of a school served by the water system requests one-time assistance with lead sampling in writing, the water system shall:</p> <ol style="list-style-type: none"> Respond in writing within 60 days of receiving the school's lead sampling request and schedule a meeting with school officials, including at least one staff member familiar with the school's water infrastructure, to develop a sampling plan. An example school lead sampling plan is located on the DDW Lead Sampling in California Schools website. The sampling plan may use the USEPAs "3Ts for Reducing Lead in Drinking Water in Schools" as general guidance. The 3T document can be found online at: https://www.epa.gov/sites/production/files/2015-09/documents/toolkit_lead_schools_guide_3ts_leadschools.pdf Finalize a sampling plan and complete the initial sampling within 90 days of receiving the lead sampling request, except that if the water system cannot complete the sampling plan and the lead sampling in that time period, the water system shall develop and comply with a time schedule to complete the sampling plan and initial lead sampling that has been approved by DDW. Collect from one to five samples at each school from regularly used drinking fountains, cafeteria/food preparation areas, or reusable bottle water filling stations selected according to the lead sampling plan described in Provision 3 (b) using the sampling guidance located in Appendix A (Sampling Guidance) which is attached. Sample sites may be either treated or untreated. Collect lead samples during the school year, on a Tuesday, Wednesday, Thursday or Friday during a day school is in session and has been in session for at least one school day prior to the date of sampling. Ensure that samples are collected by a water system representative that is adequately trained to collect lead and copper samples. Submit the samples to an ELAP certified laboratory for analysis of lead. Require the laboratory to submit the data electronically to DDW in accordance with the electronic submittal guidance which is located on the DDW Lead Sampling in California Schools website. Provide a copy of the results to the requesting authorized school representative. Within two school business days of receipt of a laboratory result that shows an exceedance of 15 parts per billion (ppb) at a sample site, notify the school of the sample result. If an initial lead sample result shows an exceedance of 15 parts per billion (ppb) at a sample site, <ol style="list-style-type: none"> Collect an additional sample (resample) within 10 business days of receipt of the laboratory result above 15 ppb if the sample site remains in service. Collect a third sample within 10 business days after notification that a resample result described above is less than or equal to 15 ppb. If the sample site is removed from service by the school, do not collect the repeat samples unless the school has completed corrective actions. Collect at least one more lead sample at a sample site where the school has completed some corrective action following an initial lead sample result over 15 ppb (examples of corrective action are replacing interior piping, replacing faucet, installing filters, etc.) Ensure that it receives the results of the repeat lead samples required in Provision 3U) from the laboratory no more than 10 business days after the date of sample collection. Not release the lead sampling data to the public for 60 days following the receipt of the initial lead sampling results unless the water system releases the data in compliance with a Public Records Act (PRA) request for the specific results.

Permit	#	Condition												
2017PA-SCHOOLS-3410013	4	4. The water system may stop lead sampling at a school if:a. All initial samples are less than or equal to 15 ppb; orb. Repeat sampling has been analyzed for each sample location with an initial lead sample greater than 15 ppb in accordance with Provision 3, and either: i. If lead is confirmed over 15 ppb and the sample location has subsequently been physically removed from service, or ii. If the sample location remains in service, and a. If lead is confirmed over 15 ppb and the school has taken some corrective actions at the sample location and the water system has collected at least one additional lead sample after the corrective actions and the result is less than or equal to 15 ppb, or b. If lead is less than or equal to 15 ppb in both the first repeat sample and second repeat sample described in Provision 3 U). c. A written request from the water system to terminate lead sampling assistance has been approved by DOW. d. If requested in writing by the school's authorized school representative												
2017PA-SCHOOLS-3410013	5	The water system is responsible for the following costs: a. Laboratory fees for all lead samples and reporting of the results to DOW and the school, and all laboratory coordination and instruction. b. All water system staff time dedicated to the tasks required by the provisions in this permit amendment.												
2017PA-SCHOOLS-3410013	6	The water system may not use any lead samples collected as part of these special school samples to satisfy federal or state Lead and Copper Rule requirements.												
2017PA-SCHOOLS-3410013	7	The water system shall communicate with the school after lead sampling and assist the school with the interpretation of laboratory results and provide information regarding potential corrective actions if a school has confirmed lead levels above 15 ppb. The water system is not responsible to pay for any maintenance or corrections needed at the school if elevated lead levels are found in the drinking water. The water system is not responsible for determining any corrective actions needed at the school.												
2017PA-SCHOOLS-3410013	8	The water system shall keep records of all written requests from a school for lead related assistance and provide the records to DOW, upon request. Records shall include, at a minimum, the following information: a. The name of the school. If a school district makes a request, the school district's name shall be recorded along with each individual school served by the water system that is requesting sampling; b. The date of the request; c. The date of the initial meeting; d. The date of the sampling plan along with a copy of each sampling plan; and e. The date of initial lead sampling and all repeat samples.												
2017PA-SCHOOLS-3410013	9	The water system's annual Consumer Confidence Report shall include a statement summarizing the number of schools requesting lead sampling.												
01-09-18-PER-027	a	The Water System shall comply with all the requirements set forth in the California Safe Drinking Water Act, CH&SC, CCR, and any regulations, standards or orders adopted thereunder.												
01-09-18-PER-027	b	<div>The status of the following source codes have been changed from "Active" to "Standby":</div> <table><tr><th>Sources</th><th>Type</th><th>PS Code</th><th>Status</th></tr><tr><td>Diablo Drive Well</td><td>Groundwater</td><td>3410017-003</td><td>Standby</td></tr><tr><td>Diablo Drive Well – Treated XCLD</td><td>Groundwater</td><td>3410017-045</td><td>Standby</td></tr></table>	Sources	Type	PS Code	Status	Diablo Drive Well	Groundwater	3410017-003	Standby	Diablo Drive Well – Treated XCLD	Groundwater	3410017-045	Standby
Sources	Type	PS Code	Status											
Diablo Drive Well	Groundwater	3410017-003	Standby											
Diablo Drive Well – Treated XCLD	Groundwater	3410017-045	Standby											
01-09-18-PER-027	c	The Water System shall operate the water system in its entirety in accordance with the most recent Operation and Maintenance Plan reviewed and approved by the Division.												

Permit	#	Condition						
01-09-18-PER-027	d	The Water System shall apply and secure a water supply permit prior to putting Diablo Well - (Source Code: 3410013-007) back into service as an "Active" source.						
01-09-18-PER-027	e	The Water System shall operate and monitor the water quality of the Diablo Well – (Source Code: 3410013-007) in accordance with Section 64414, Article 2, Chapter 15, Division 4, Title 22 of the CCR.						
01-09-18-PER-027	f	The Water System shall monitor the bacteriological raw water quality of Diablo Well - (Source Code: 3410013-007) once every calendar quarter.						
01-09-18-PER-027	g	<i>The Water System disinfect the raw water produced by Diablo Well - (Source Code: 3410013-007) prior to distribution and use.</i>						
01-09-20-PER-019	a	The Water System shall comply with all the requirements set forth in the California Safe Drinking Water Act, California Health and Safety Code and any regulations, standards or orders adopted thereunder.						
01-09-20-PER-019	b	With this amendment, only the following facilities are added to the list of approved facilities for use by the Water System. <table><tr><th>Facility</th><th>Capacity</th></tr><tr><td>Tank at 5444 San Juna Ave.</td><td>1.5 Million Gallons</td></tr><tr><td>Pump Station at 5444 San Juna Ave.</td><td>2,100 gpm (2 pumps in operation, 1 standby)</td></tr></table>	Facility	Capacity	Tank at 5444 San Juna Ave.	1.5 Million Gallons	Pump Station at 5444 San Juna Ave.	2,100 gpm (2 pumps in operation, 1 standby)
Facility	Capacity							
Tank at 5444 San Juna Ave.	1.5 Million Gallons							
Pump Station at 5444 San Juna Ave.	2,100 gpm (2 pumps in operation, 1 standby)							
01-09-20-PER-019	c	No changes, additions, or modifications shall be made to the Water System sources, pump stations, storage tanks, or treatment processes unless an amended water supply permit has been obtained from the Division.						
01-09-20-PER-019	d	The Water System shall maintain operational records. Monthly reports shall be submitted to the Division by the 10th day of the following month. <i>Division comment: California American Water shall follow all regulatory record keeping and reporting requirements per California Code of Regulations Title 17 and 22.</i>						
01-09-20-PER-019	e	In accordance with CCR, Title 22, Division 4, Chapter 13, and Health and Safety Code, Di						
01-09-20-PER-019	f	In accordance with Section 64535, Article 4, Chapter 15.5, Division 4, Title 22 of the CCR, Monitoring Plan for review and comment by the Division by November 30, 2020. The Monitoring Plan shall include, but not be limited to, the requirements of disinfectant(s) and disinfection byproducts.						
01-09-20-PER-019	g	In accordance with Section 64600, Article 8, Chapter 16, Division 4, Title 22 of the CCR, the Water System shall review the existing Operations and Maintenance (O&M) Plan. Upon this review, the Water System shall either confirm that the existing O&M Plan meets the water system operations needs and requirements or the Water System shall update and submit an amended O&M Plan for review and comment by the Division by November 30, 2020. Thereafter, facilities shall be operated in accordance with the latest approved O&M Plan. Any significant changes to this plan shall be reviewed by the Division before implementation.						
01-09-20-PER-019	h	Water supplied by the Water System for domestic purposes shall meet all applicable Maxi to permit approval.						
01-09-20-PER-019	i	The Water System shall comply with all requirements of Group 4, Subchapter 1, Chapter 5, Division 1, Title 17 of the CCR, to prevent the water system and treatment facilities from being contaminated from possible cross-connections. The Water System shall maintain a program for the protection of the domestic water system against backflow from premises having dual or unsafe water systems in . accordance with the requirements in these regulations. All backflow prevention devices shall be tested annually.						

Permit	#	Condition
01-09-20-PER-019	j	The Water System shall maintain monthly water production records for each source, these records shall be reported to the Division upon request.
01-09-20-PER-019	k	In accordance with Section 64591, Article 7, Chapter 16, Division 5, Title 22 of the CCR, all materials in contact with drinking water shall be tested and certified as meeting the specification of NSF/ANSI Standard 61. This requirement shall be met under testing conducted by a product certification organization accredited for this purpose by the American National Standards Institute.
01-09-20-PER-019	l	When distribution bacteriological samples are collected, the free chlorine residual of the water samples shall be measured and recorded and reported quarterly in accordance with Section 64537.4, Article 6, Chapter 15.5, Division 4, Title 22 of the CCR.
01-09-20-PER-019	m	All water monitoring equipment such as; meters, flow totalizers, online analyzers, process instrumentations, etc. shall be calibrated as recommended by the manufacturer. Records of the calibrations shall be maintained for at least three years.
01-09-20-PER-019	n	All operation and water quality records shall be maintained by the Water System for at least five years for the Division review upon request.
01-09-20-PER-019	o	The Water System shall review its current Emergency Response Plan (ERP) and either confirm that the current ERP is adequate or submit a revised ERP by November 30, 2020.
01-09-20-PER-019	p	New reservoirs and reservoirs that are removed from service for maintenance and repair shall be disinfected and samples for bacteriological quality in accordance with Section 64582, Article 5, Chapter 16, Division 4, Title 22 of the CCR. Vents shall be covered with fine-mesh screen and adequately air-gapped to prevent cross-connections.
01-09-20-PER-019	q	<p>The Water System shall implement a reservoir inspection and cleaning program. This program shall include, as a minimum:</p> <ul style="list-style-type: none"> i. The Water System shall visually inspect all reservoirs at least twice a year (once every six months). A record of each inspection shall be maintained and be available for review by the Division. These inspections shall include but not be limited to the following items: <ul style="list-style-type: none"> A. Condition of air vent screens, B. Puddling of water on the roof, C. Leaks through openings at the roof and/or access hatches, D. Visual inspection of the interior of the tanks, E. Potential vandalism and breach of site security, F. Access lock security, G. Vegetation growth within 10 feet of the tanks, H. Any other sanitary and security issues ii. An inspection of no less than once every six (6) months, with documentation, of each reservoir's valve boxes. Valves shall be tested for proper function per manufacturer recommendations. iii. The reservoirs shall be dived or drained, inspected, cleaned, and disinfected at least once every three (3) to five (5) years per Section 64582, Article 5, Chapter 16, Division 4, Title 22 of the CCR requirements. <p><i>Division comment: The checklists in the California American Water Company "Tank Inspection Practice -Final 2019 11 25" list all the items listed in i and ii of the condition. Regarding iii stating "every three (3) to five (5) years per Section 64582, Article 5, Chapter 16, Division 4, Title 22 of the CCR requirements." Section 64582 is for Disinfection of Reservoirs....California American Water is conducting comprehensive inspection at least every 7 years per tank inspection program.</i></p>

A. ENFORCEMENT

California Health and Safety Code, Part 12, Chapter 4, Article 9: Remedies

Number of enforcements since last inspection: According to SDWIS, there have not been any enforcement actions since the last inspection.

B. SYSTEM CHANGES

Changes since the last inspection: None requiring a permit amendment.

Recently completed changes: None requiring a permit amendment.

C. CONSUMER AND PRODUCTION DATA

Available historic data: Cal-AM Lincoln Oaks water system has historic data including: number of service connections, population served, and water demand / production are tabulated in table below.

Table 3 – Water System Historic Data

Year	Service Connect ions (metere d)	Population ^A	Demand (MG)						Max. Daily Demand (GPM) ^B	Peak Hourly Demand (GPM) ^C
			Max Day	Max Month			Year			
			Date	Produced	Month	Purchased	Produced	Purchased		
2011	14,292	47,164	NR	348	Aug	NR	2,002	NR	11,690	17,535
2012	14,282	47,131	NR	376	July	NR	2,337	84	12,636	18,955
2013	14,409	47,550	NR	339	July	NR	2,351	NR	11,403	17,104
2014	14,811	48,876	NR	243	June	NR	1,802	NR	8,158	12,237
2015	14,391	47,491	NR	174	Aug	NR	1,522	NR	5,840	8,760
2016	14,418	47,579	NR	224	July	NR	1,642	71	7,542	11,313
2017	14,416	46,220	NR	239	July	21.073	1,466	358	8,030	12,045
2018	14,417	47,577	NR	252	Aug	37.327	1,624	230	8,452	12,678
2019	14,411	47,557	NR	117	July	34.398	934	299	3,923	5,885
2020	14,390	47,487	NR	241	Aug	NR	1,822	29	8,087	12,131

Notes: A Data from electronic annual water system reports

B Per Section 64554, maximum day demand determined by reported max day demand, when maximum day demand was not reported, maximum month was used to calculate max day demand, when maximum month was not reported annual demand was used to calculate max day demand.

C 1.5 times max day demand

NR not reported in electronic annual water system report

Discussion and Appraisal: The maximum day demand was determined in accordance with Chapter 16. California Waterworks Standards, §64554. New and Existing Source Capacity. The max day demand scenario is based on the

highest yearly max day demand or calculated yearly max day demand in the last ten years. The maximum day demand for water system is 12,636 -GPM and peak hour demand is 18,955 -GPM based on max month demand data provided in 2012.

D. APPROVED SOURCES:

California Code of Regulations, Title 22, Chapter 16, Article 3: Water Sources

Sources: The Cal-AM Lincoln Oaks water system's water distribution grid is supplied by 24 groundwater wells and interconnections.

Table 4 –Sources

	Sources	Status	Capacity (gpm)	Comments
1	Andrea 02 Well (Source No. 3410013-001-001)	Active	1,200	<ul style="list-style-type: none"> - 150-hp water-lubricated turbine pump - 10,000-gallon hydropneumatics tank - Electrical power connection port - Pump-to-waste - Flow meter
2	Andrea Well 01 (Source No. 3410013-002-002)	Active	1,175	<ul style="list-style-type: none"> - 150-hp oil-lubricated turbine pump - Diesel electric mobile generator on-site - Pump-to-waste capability available on-site - Equipped with a magnetic flow meter
3	Halifax (Auburn) Well (Source No. 3410013-003-003)	Active	575	<ul style="list-style-type: none"> - 50-hp water-lubricated turbine pump - Pump-to-waste - Flow meter
4	Carriage Drive Well (Source No. 3410013-004-004)	Active	525	<ul style="list-style-type: none"> - 75-hp submersible pump - 3,000-gallon hydropneumatics tank - Pump-to-waste - Sand separator - Flow meter
5	Chipping Way Well (Source No. 3410013-005-005)	Active	750	<ul style="list-style-type: none"> - 100-hp submersible pump - 105-gallon hypochlorite day tank - Pump-to-waste - Flow meter
6	Crosswoods Well (Source No. 3410013-006-006)	Active	650	<ul style="list-style-type: none"> - 75-hp water-lubricated turbine pump - Electrical power connection port - Pump-to-waste - Flow meter
7	Diablo Drive Well (Source No. 3410013-007-007)	Standby	710	<ul style="list-style-type: none"> - 125-hp water-lubricated turbine pump - Electrical power connection port - Pump-to-waste - Flow meter
8	Fort Sutter Well (Source No. 3410013-008-008)	Active	595	<ul style="list-style-type: none"> - 60-hp oil-lubricated turbine pump (VFD) - Electrical power connection port - Pump-to-waste - Flow meter
9	Glass Slipper Well (Source No. 3410013-009-009)	Active	450	<ul style="list-style-type: none"> - 50-hp oil-lubricated turbine pump - 105-gallon hypochlorite day tank - Pump-to- - Flow meter

	Sources	Status	Capacity (gpm)	Comments
10	Hemlock Well (Source No. 3410013-010-010)	Active	415	- 100-hp oil-lubricated turbine pump - 6,000-gallon hydropneumatics tank - Pump-to-waste - Flow meter
11	Laural Oaks Well (Source No. 3410013-012-012)	Active	650	- 75-hp water-lubricated turbine pump - 5,000-gallon hydropneumatics tank - Electrical power connection port - Pump-to-waste - Flow meter
12	Le Mans Well (Source No. 3410013-013-013)	Active	770	- 100-hp water-lubricated turbine pump - Electrical power connection port - Pump-to-waste - Sand separator - Flow meter Offline at time of inspection – pump removed
13	Linda Sue Well (Source No. 3410013-014-014)	Active	495	- 60-hp submersible pump - 5,000-gallon hydropneumatics tank - Electrical power connection port - Pump-to-waste - Flow meter
14	New Rushmore Well (Source No. 3410013-015-015)	Active	555	- 75-hp water-lubricated turbine pump - 5,000-gallon hydropneumatics tank - Diesel electric mobile generator on-site - Pump-to-waste - Flow meter
15	Oak Forest Well (Source No. 3410013-016-016)	Active	500	- Water lubricated well - 6,000-gallon hydropneumatics - Pump-to-waste - 2 GAC vessels - Flow meter
16	Roseville Well (Source No. 3410013-019-019)	Active	605	- 75-hp water-lubricated turbine pump - 5,000-gallon hydropneumatics tank - Electrical power connection port - Pump-to-waste - Flow meter
17	Shennandoah Well (Source No. 3410013-021-021)	Active	910	- 100-hp oil-lubricated turbine pump - 5,000-gallon hydropneumatics tank - Pump-to-waste - Flow meter
18	Treelark Well (Source No. 3410013-022-022)	Active	630	- 75-hp water-lubricated turbine pump - Pump-to-waste - 2 GAC vessels - Flow meter
19	Twin Park Well (Source No. 3410013-023-023)	Active	1,200	- 150-hp oil-lubricated turbine pump - 7,500-gallon hydropneumatics tank - Diesel electric mobile generator on site - Pump-to-waste - Flow meter
20	Van Maren Well (Source No. 3410013-024-024)	Active	760	- 75-hp water-lubricated turbine pump - 5,000-gallon hydropneumatics tank - Diesel electric mobile generator on-site - Pump-to-waste - Flow meter

	Sources	Status	Capacity (gpm)	Comments
21	Villaview Well (Source No. 3410013-025-025)	Active	800	- Pump-to-waste - Flow meter - Offline at time of inspection – pump removed
22	Cherbourg Well (Source No. 3410013-026-026)	Active	1,000	- 150-hp water-lubricated turbine pump - 10,000-gallon hydropneumatics tank - Electrical power connection port - Pump-to-waste - Flow meter - Offline at time of inspection – pump removed
23	Summer Place Well (Source No. 3410013-027-027)	Active	750	- 150-hp submersible turbine pump - 10,000-gallon hydropneumatics tank - Electrical power connection port - Pump-to-waste - Flow meter - 2 GAC vessels
24	Daly Well (Source No. 3410013-028-028)	Active	1,360	- 150-hp water-lubricated turbine pump - 10,000-gallon hydropneumatics tank - Diesel mobile electric generator on-site - Pump-to-waste - Flow meter
25	Citrus Heights Water District (Source No. 3410013-036-036)	3410006	619 1,096	6" / 6" Metered 12" / 8" Metered
26	Sacramento Suburban Water District (Source No. 3410013-037-037)	3410001	1,712	10" / 10" Metered
	Total		18,030+ 3,427 = 21,457	
	Sacramento Suburban Water District (PWS# 3410001)	3410001	619 619 619 619	6" Unmetered 6" Unmetered 6" Unmetered 6" / 6" Unmetered
	Citrus Heights Water District (PWS# 3410006)	3410006	1,712 548 ³ 1,096	10" / 10" Unmetered 8" / 10" Unmetered 12" / 8" Unmetered
	City of Roseville (PWS# 3110008)	3110008	1,712	12" / 10" Unmetered

E. WATERWORKS STANDARD SOURCE AND STORAGE CAPACITY

California Code of Regulations, Title 22, Chapter 16, Section 64554: New and Existing Source Capacity

Current available source capacity: 21,457-GPM (31 MGD)

Firm capacity (largest source out of service): 19,745-GPM (28 MGD)
Total available storage capacity: 3.5 MG
Maximum Day Demand: 12,636 -GPM (18 MGD)
Peak hour Demand: 18,955 -GPM (5 MG – 4 hours)

Discussion and Appraisal: Per section 64554 of Chapter 16, California Waterworks Standards, a public water system shall be able to meet the system's maximum day demand (MDD). In addition, for systems with 1,000 or more service connections, the system shall be able to meet four hours of peak hourly demand (PHD) with source capacity, storage capacity, and/or emergency source connections. Both the MDD and PHD requirements shall be met in the system as a whole and in each individual pressure zone.

The calculated maximum day demand is 12,636-GPM and peak hour demand is 18,955-GPM per Table 3 above. Water System has 21,457-GPM capacity from groundwater wells and wholesaler per Table 4 above. In addition, there is 3.5 MG of storage.

F. TREATMENT

I. Chlorination

Process Description: Injection of 12.5% sodium hypochlorite solution prior to entry point to the distribution system at each source or treatment plant

Table 5 - Chlorine System Chemical Information

Chemicals	Manufacturer	ANSI/ NSF 60 Certified
Sodium Hypochlorite (12.5%)	Sierra Chemical	Yes

Table 6 - Distribution System Chlorine Concentration Summary

Year	Month	Average
2020	July	0.69
	August	0.68
	September	0.72
	October	0.74
	November	0.74
	December	0.75
2021	January	0.75
	February	0.57
	March	0.63
	April	0.74
	May	0.74
	June	0.74
	Running Annual Average (RAA):	0.71

Discussion and Appraisal: Water System is in compliance with the §64533.5. Maximum Residual Disinfectant Levels. Running annual average of 4.0 mg/L.

G. WATER TREATMENT

Table 7 – Summary of Groundwater Treatment Plants

Groundwater Treatment Plant Name	Treatment Plant Classification	Capacity (MGD)	Type of Treatment
Oak Forest WTP	T2	0.720	GAC
Treelark WTP	T2	0.910	GAC
Summerplace Well WTP	T2	1.080	GAC

Oak Forest GAC WTP

Raw Water Source: Oak Forest Well (Source No. 3410013-016) (groundwater)

Treatment method: There are two vessels that operate in series. Adsorption of tetrachloroethylene (PCE) by granular activated carbon (GAC). Sodium hypochlorite is added post-filtration for chlorination.

Table 8 - Summary of PCE Sampling Results

2021	Raw (ug/L)	Treated (ug/L)
January	Offline	Offline
February	Offline	Offline
March	1.9	<0.5
April	1.5	<0.5
May	2.1	<0.5
June	1.7	<0.5
July	1.5	<0.5
August	1.4	<0.5
September	1.3	<0.5
October	1.4	<0.5
Average	1.6	<0.5

Backwash process description: Backwashing is conducted after GAC media change-outs. Backwash water is supplied by treated system water.

Filter Inspection Frequency: Depending on water system demand and plant operation, filter media inspections take place during routine GAC media replacement.

Description of treatment records: Daily records are maintained.

Treelark GAC WTP

Raw Water Source: Treelark Well (Source No. 3410013-022) (groundwater)

Table 9 - Summary of PCE Sampling Results

2021	Raw (ug/L)	Treated (ug/L)
January	Offline	Offline
February	Offline	Offline
March	Offline	Offline
April	Offline	Offline
May	Offline	Offline
June	Offline	Offline
July	Offline	Offline
August	Offline	Offline
September	Offline	Offline
October	Offline	Offline
Average	NA	NA

Treatment method: There are two vessels that operate in series. Adsorption of tetrachloroethylene (PCE) by granular activated carbon (GAC). Sodium hypochlorite is added post-filtration for chlorination.

Backwash process description: Backwashing is conducted after GAC media change-outs. Backwash water is supplied by treated system water.

Filter Inspection Frequency: Depending on water system demand and plant operation, filter media inspections take place during routine GAC media replacement.

Description of treatment records: Daily records are maintained.

Summer Place GAC WTP

Raw Water Source: Summer Place Well (Source No. 3410013-027) (groundwater)

Table 10 - Summary of PCE Sampling Results

2021	Raw (ug/L)	Treated (ug/L)
January	Offline	Offline
February	3.6	<0.5
March	5.2	<0.5
April	4.1	<0.5
May	4.4	<0.5
June	4.8	<0.5
July	4.9	<0.5
August	4.5	<0.5
September	4.1	<0.5
October	4.3	<0.5
Average	4.4	<0.5

Treatment method: There are two vessels that operate in series. Adsorption of tetrachloroethylene (PCE) by granular activated carbon (GAC). Sodium hypochlorite is added post-filtration for chlorination.

Backwash process description: Backwashing is conducted after GAC media change-outs. Backwash water is supplied by treated system water.

Filter Inspection Frequency: Depending on water system demand and plant operation, filter media inspections take place during routine GAC media replacement.

Description of treatment records: Daily records are maintained.

- i. **Treatment operator certification requirements:** According to Section 64413.1, Article 2, Chapter 15, Division 4, Title 22 of the California Code of Regulations, the treatment system has been classified as a "T3" water system.

H. RESERVOIRS AND STORAGE TANKS

California Code of Regulations, Title 22, Chapter 16, Article 6: Distribution Reservoirs

Reservoirs and Storage Tanks: The Cal-AM Lincoln Oaks water system has two reservoirs as stated in Table below.

Table 11 - Reservoir and Storage Tank Summary

Name	Type	Capacity (MG)
Roseville Road Reservoir	Welded Steel	2.0
Lincoln Oaks Reservoir (5444 San Juan Ave)	Welded Steel	1.5
Total		3.5 MG

I. DISTRIBUTION SYSTEM

California Code of Regulations, Title 22, Chapter 16: California Waterworks Standards

DISTRIBUTION SYSTEM INFORMATION

- ii. **Distribution operator certification requirements:** According to Table 64413.3-A in Section 64413.3, Article 2, Chapter 15, Division 4, Title 22 of CCR, and based on the number of service connections, the Parkway water distribution system is classified as "D3" distribution system.

Certified Operators: A list of all Certified Distribution System Operators was submitted in the electronic annual report

PRESSURE ZONES

Pressure Zones: The Water System's drinking water distribution system has one pressure zone listed below.

Table 12 - Distribution Pressure Zones Summary

Pressure Zone Name	Pressure Range (psi)	Comments
Zone 1	55 - 85	

BOOSTER PUMP AND PRESSURE REDUCING STATIONS

California Code of Regulations, Title 22, Chapter 16, Article 4: Pumping Stations

Booster Pump and Pressure reducing Stations: Pump stations summary are tabulated in Table below.

Table 13 - Summary of Booster Stations

Station Name	Status	Capacity (gpm)	From Zone	To Zone	Number of Pumps	Pump Power (hp)	Comments
Roseville Road	Active	3,000 (3x 1,000)	Roseville Road Tank	Distribution System	3	50-hp (each)	Generator Connection
Lincoln Oaks (5444 San Juan Ave)	Active	2,100 gpm (2 pumps in operation, 1 standby)	Roseville Road Tank	Distribution System	3	50-hp (each)	generator onsite

WATER MAINS AND SERVICE CONNECTIONS

California Code of Regulations, Title 22, Chapter 16, Article 4: Materials and Installation of Water Mains and Appurtenances

Water Mains and Service Connections: The distribution system piping material is tabulated below.

Table 14 - Summary of Water Mains

Pipeline Material	Percent Of Distribution Pipe System Composed Of The Materials Selected Above	Average Age (In Years)
Plastic	12.1	54.1
Steel	11	63.8
Cast Iron	0	0
Galvanized Iron	0	0
Ductile Iron	1.6	93.9
Cement Concrete	0	0
Asbestos Cement	75.2	52
other:	0.1	121

DISTRIBUTION SYSTEMS PROBLEMS

Distribution System Problems: Water System water distribution system problems are tabulated below.

Table 15 - Summary of Distribution System Problems

Year	Type of Problem				
	Service Connection Breaks/ Leaks	Main Breaks/Leaks	Water Outages	Boil Water Orders	Total
2017	37	4	0	0	41
2018	35	4	0	0	39
2019	37	7	0	0	44

J. WATER QUALITY AND MONITORING
BACTERIOLOGICAL MONITORING

California Code of Regulations, Title 22, Chapter 15, Article 3: Bacteriological Quality

Program Description: Based on the population served (47,487) and the number of service connections (14,390) from the 2019 eAR and according to Table 64423-A in Section 64423, Article 3, Chapter d15, Division 4, Title 22 of the California Code of Regulations, the water system is required to take at least 50 samples per month.

Table 16 - Table 64423-A in Section 64423

Monthly Population Served	Service Connections	Minimum Number Of Samples Per Month
33,001 to 41,000	11,801 to 14,600	40
41,001 to 50,000	14,601 to 17,900	50
50,001 to 59,000	17,901 to 21,100	60

The water system Bacteriological Sample Siting Plan (BSSP) is dated July 1, 2021. Samples are currently sent to CLS for analysis. Summary reports and lab results are sent to the Division by the 10th of the following month.

Bacteriological Sample Siting Plan (BSSP)

Copy received by the Division: ☒ Yes ☐ No

Sampler(s): Operators

Laboratory: CLS **Phone:** (916) 638 7301 **ELAP Cert. No.:** 1222

Factor controlling sample size: ☒ Population ☒ Service Connections

Number of samples required: 50 per month

Number of samples taken: 13 per week (min. 52 per month)

Raw water sampling frequency: Quarterly

Table 17 – Distribution Total Coliform Monitoring

Month	Number Of Distribution Total Coliform Samples Collected	Number Of Distribution Positives
Oct-20	52	0
Nov-20	52	0
Dec-20	65	0
Jan-21	52	0
Feb-21	52	0
Mar-21	65	0
Apr-21	52	0
May-21	52	0
Jun-21	65	0
Jul-21	52	0
Aug-21	52	0
Sep-21	52	0

Discussion and appraisal: Bacteriological monitoring is in compliance and follows the BSSP.

1. Summary of Raw Water Bacteriological Sampling: Monitoring is required quarterly in accordance with §64421. General Requirements.:

"§64421. General Requirements. (b) In addition to the bacteriological monitoring requirements in Sections 64423, 64424, 64425, and 64426.9, a public water system shall perform special purpose bacteriological monitoring as follows: (2) For a groundwater (not GWUDI) source that is treated with a primary or residual disinfectant on a continuous basis and is not monitored pursuant to Section 64654.8(b)(1)(B): (A) A raw water sample shall be collected each calendar quarter, with samples collected during the same month (first, second, or third) of each calendar quarter;"

Table 18 – Source coliform monitoring

Well Name	Status (On/Off)	Sample Time & Date	Total Coliforms (P/A, CFU or MPN)	E. coli (P/A, CFU or MPN)
Cherbourg	ON	5/3/21 11:05 AM	Absent	Absent
Glass Slipper	ON	5/3/21 9:55 AM	Absent	Absent
Andrea 1	OFF	5/4/21 8:30 AM	Absent	Absent
Carriage	ON	5/3/21 8:50 AM	Absent	Absent
Chipping	ON	5/3/21 9:15 AM	Absent	Absent
Crosswoods	ON	5/4/21 8:15 AM	Absent	Absent
Daly	ON	5/4/21 11:05 AM	Absent	Absent
Le Mans	ON	5/4/21 9:00 AM	Absent	Absent
Linda Sue	ON	5/3/21 11:00 AM	Absent	Absent
Rushmore	ON	5/3/21 12:15 PM	Absent	Absent
Twin Parks	ON	5/5/21 8:00 AM	Absent	Absent
Vanmaren	ON	5/3/21 11:00 AM	Absent	Absent
Shenandoah	ON	5/4/21 7:45 AM	Absent	Absent
Andrea 2	ON	5/4/21 10:35 AM	Absent	Absent
Fort Sutter	ON	5/4/21 8:45 AM	Absent	Absent
Halifax	OFF	5/4/21 9:45 AM	Absent	Absent
Hemlock	OFF	5/4/21 10:53 AM	Absent	Absent
Summerplace (Raw)	ON	4/27/21 10:45 AM	Absent	Absent
Summerplace (Raw)	ON	5/3/21 8:10 AM	Absent	Absent
Summerplace (Raw)	ON	6/9/21 8:25 AM	Absent	Absent
Oak Forest (Raw)	ON	4/22/21 2:45 PM	Absent	Absent
Oak Forest (Raw)	ON	5/5/21 9:30 AM	Absent	Absent
Oak Forest (Raw)	ON	6/9/21 12:20 PM	Absent	Absent
Treelark (Raw)	OFF	4/22/21 2:10 PM	Absent	Absent
Laurel Oaks	ON	5/3/21 10:00 AM	Absent	Absent

CHEMICAL MONITORING

California Code of Regulations, Title 22, Chapter 15, Articles 4 through 17 inclusive: Inorganic Chemicals, Radioactivity, Organic Chemicals, Secondary Drinking Water Standards, et al.

Program Description: Water System monitors for chemicals at the raw water sample point in accordance with the frequencies listed in the tables below.

Laboratory: BSK Associates
Inorganic Chemicals

Phone: (559) 497-2888 **ELAP No.:** 1180

Table 19 - Inorganic Chemicals Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Over MCL?	Comments
Andrea 02	Triennially	8/3/2021	2024	No	
Andrea Well 01	Triennially	8/4/2021	2024	No	
Carriage Dr. Well	Triennially	8/3/2021	2024	No	
Cherbourg Well	Triennially	8/3/2021	2024	No	
Chipping Way Well	Triennially	8/3/2021	2024	No	
Crosswoods Well	Triennially	8/3/2021	2024	No	
Daly	Triennially	8/3/2021	2024	No	
Diablo Drive Well	Every Nine Years	8/19/2015	2024	No	Standby
Fort Sutter Well	Triennially	8/2/2021	2024	No	
Glass Slipper Well	Triennially	8/2/2021	2024	No	
Halifax (Auburn) Well	Triennially	8/2/2021	2024	No	
Hemlock Well	Triennially	8/2/2021	2024	No	
Laural Oaks Well	Triennially	8/3/2021	2024	No	
Lemans Well	Triennially	8/13/2018	2021	No	
Linda Sue Well	Triennially	8/3/2021	2024	No	
New Rushmore Well	Triennially	8/2/2021	2024	No	
Oak Forrest Well	Triennially	8/4/2021	2024	No	
Roseville Road Well	Triennially	10/12/2021	2024	No	
Shennandoah Well	Triennially	8/2/2021	2024	No	
Summer Place Well	Triennially	3/18/2020	2023	No	
Treelark Well	Triennially	1/19/2021	2024	No	
Twin Park Well	Triennially	8/4/2021	2024	No	
Vanmaren Well (Mercedes)	Triennially	8/3/2021	2024	No	
Villaview Well	Triennially	8/13/2018	2021	No	

Discussion and Appraisal: Inorganic chemicals results not above, at, or trending near MCLs.

Table 20 – Perchlorate Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Over MCL?	Comments
Andrea 02	Triennially	8/3/2021	2024	No	
Andrea Well 01	Triennially	8/4/2021	2024	No	
Carriage Dr. Well	Triennially	8/3/2021	2024	No	
Cherbourg Well	Triennially	8/3/2021	2024	No	
Chipping Way Well	Triennially	8/3/2021	2024	No	
Crosswoods Well	Triennially	8/3/2021	2024	No	
Daly	Triennially	8/3/2021	2024	No	
Diablo Drive Well	Every Nine Years	8/19/2015	2024	No	Standby
Fort Sutter Well	Triennially	8/2/2021	2024	No	
Glass Slipper Well	Triennially	8/2/2021	2024	No	
Halifax (Auburn) Well	Triennially	8/2/2021	2024	No	
Hemlock Well	Triennially	8/2/2021	2024	No	
Laural Oaks Well	Triennially	8/3/2021	2024	No	
Lemans Well	Triennially	8/13/2018	2021	No	
Linda Sue Well	Triennially	8/3/2021	2024	No	
New Rushmore Well	Triennially	8/2/2021	2024	No	
Oak Forrest Well	Triennially	8/4/2021	2024	No	
Roseville Road Well	Triennially	10/12/2021	2024	No	
Shennandoah Well	Triennially	8/2/2021	2024	No	
Summer Place Well	Triennially	3/18/2020	2023	No	
Treelark Well	Triennially	2/10/2021	2024	No	
Twin Park Well	Triennially	8/4/2021	2024	No	
Vanmaren Well (Mercedes)	Triennially	8/3/2021	2024	No	
Villaview Well	Triennially	8/13/2018	2021	No	

Discussion and Appraisal: Perchlorate results not above, at, or trending near MCLs.

Table 21 - Asbestos Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Over MCL?	Comments
Andrea 02	Every Nine Years	2/9/2021	2030	No	
Andrea Well 01	Every Nine Years	2/9/2021	2030	No	
Carriage Dr. Well	Every Nine Years	2/9/2021	2030	No	
Cherborough Well	Every Nine Years	2/9/2021	2030	No	
Chipping Way Well	Every Nine Years	2/9/2021	2030	No	
Crosswoods Well	Every Nine Years	2/9/2021	2030	No	
Daly	Every Nine Years	2/10/2021	2030	No	
Diablo Drive Well	Every Nine Years	9/12/2012	2021	No	Standby
Fort Sutter Well	Every Nine Years	2/10/2021	2030	No	
Glass Slipper Well	Every Nine Years	8/2/2021	2030	No	
Halifax (Auburn) Well	Every Nine Years	2/17/2021	2030	No	
Hemlock Well	Every Nine Years	2/18/2021	2030	No	
Laural Oaks Well	Every Nine Years	2/9/2021	2030	No	
Lemans Well	Every Nine Years	2/18/2021	2030	No	
Linda Sue Well	Every Nine Years	2/9/2021	2030	No	
New Rushmore Well	Every Nine Years	2/9/2021	2030	No	
Oak Forrest Well	Every Nine Years	3/18/2021	2030	No	
Roseville Road Well	Every Nine Years	2/9/2021	2030	No	
Shennandoah Well	Every Nine Years	2/10/2021	2030	No	
Summer Place Well	Every Nine Years	2/17/2021	2030	No	
Treelark Well	Every Nine Years	2/10/2021	2030	No	
Twin Park Well	Every Nine Years	2/17/2021	2030	No	
Vanmaren Well (Mercedes)	Every Nine Years	2/10/2021	2030	No	
Villaview Well	Every Nine Years	9/11/2012	2021	No	

Discussion and Appraisal: No chemicals sampled above, at, or trending near MCLs. Per 64432.2, Monitoring and Compliance – Asbestos below, Parkway shall continue to monitor for asbestos at each

source or entry point to the distribution system and one sample at a tap served by asbestos-cement pipe under conditions where asbestos contamination is most likely. Monitoring shall occur each nine-year compliance cycle.

"§64432.2. Monitoring and Compliance – Asbestos:

(a) All community and nontransient-noncommunity water systems are required to monitor to determine compliance with the MCL for asbestos in Table 64431-A during the year designated by the State Board of the first compliance period of each nine-year compliance cycle, beginning in the compliance period starting January 1, 1993. The State Board will designate the year based on historical monitoring frequency and laboratory capacity.

(1) If a groundwater system is vulnerable to asbestos contamination solely in its source water, it shall collect one sample at every entry point to the distribution system which is representative of each water source after treatment and proceed in accordance with Subsections 64432(c)(2) through (e) and Subsections 64432(g) through (l).

(2) All approved surface water systems shall be designated vulnerable to asbestos contamination in their source waters. If a surface water system is vulnerable solely in its source water, it shall proceed as in paragraph (1) above.

(3) If a system is vulnerable to asbestos contamination due to leaching of asbestos-cement pipe, with or without vulnerability to asbestos contamination in its source water, it shall take one sample at a tap served by asbestos-cement pipe under conditions where asbestos contamination is most likely to occur."

Secondary Drinking Water Standards

Table 22 - Secondary Standards Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Over MCL?	Comments
Andrea 02	Triennially	8/3/2021	2024	No	
Andrea Well 01	Triennially	8/4/2021	2024	No	Manganese 47 ug/L 2/9/2021
Carriage Dr. Well	Triennially	8/3/2021	2024	No	
Cherbourg Well	Triennially	8/3/2021	2024	No	
Chipping Way Well	Triennially	8/3/2021	2024	No	
Crosswoods Well	Triennially	8/3/2021	2024	No	
Daly	Triennially	8/3/2021	2024	No	
Diablo Drive Well	Every Nine Years	8/19/2015	2024	No	Standby
Fort Sutter Well	Triennially	8/2/2021	2024	No	
Glass Slipper Well	Triennially	8/2/2021	2024	No	
Halifax (Auburn) Well	Triennially	8/2/2021	2024	No	Iron 1280 ug/L 8/11/2021
Hemlock Well	Triennially	8/2/2021	2024	No	Manganese 68 ug/L 3/2/2021
Laural Oaks Well	Triennially	8/3/2021	2024	No	Iron 430 ug/L 8/3/2021
Lemans Well	Triennially	8/13/2018	2021	No	
Linda Sue Well	Triennially	8/3/2021	2024	No	
New Rushmore Well	Triennially	8/2/2021	2024	No	
Oak Forrest Well	Triennially	8/4/2021	2024	No	
Roseville Road Well	Triennially	10/12/2021	2024	No	
Shennandoah Well	Triennially	8/2/2021	2024	No	
Summer Place Well	Triennially	3/18/2020	2023	No	
Treelark Well	Triennially	1/19/2021	2024	No	
Twin Park Well	Triennially	8/4/2021	2024	No	
Vanmaren Well (Mercedes)	Triennially	8/3/2021	2024	No	
Villaview Well	Triennially	8/13/2018	2021	No	

Discussion and Appraisal: No chemicals sampled above, at, or trending near MCLs. All wells with iron and manganese above SMCL are monitored quarterly.

Nitrates/Nitrites

Table 23 - Nitrate Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Over MCL?	Comments
Andrea 02	Annually	8/3/2021	2022	No	
Andrea Well 01	Annually	8/4/2021	2022	No	
Carriage Dr. Well	Annually	8/3/2021	2022	No	
Cherbourg Well	Annually	8/3/2021	2022	No	
Chipping Way Well	Annually	8/3/2021	2022	No	
Crosswoods Well	Annually	8/3/2021	2022	No	
Daly	Annually	8/3/2021	2022	No	
Diablo Drive Well	Every Nine Years	2/19/2018	2027	No	Standby
Fort Sutter Well	Annually	8/2/2021	2022	No	
Glass Slipper Well	Quarterly	8/2/2021	4 th quarter 2021	No	3.71 ug/L
Halifax (Auburn) Well	Annually	8/2/2021	2022	No	
Hemlock Well	Annually	8/2/2021	2022	No	
Laural Oaks Well	Annually	8/3/2021	2022	No	
Lemans Well	Annually	8/6/2020	2022	No	
Linda Sue Well	Annually	8/3/2021	2022	No	
New Rushmore Well	Annually	8/2/2021	2022	No	
Oak Forrest Well	Quarterly	10/13/2021	1 st quarter 2022	No	Quarterly per permit condition 01-09-10-PER-003 (e)
Roseville Road Well	Annually	11/18/2021	2022	No	
Shennandoah Well	Quarterly	8/2/2021	4 th Quarter 2021	No	6.84 ug/L
Summer Place Well	Annually	10/13/2021	2022	No	
Treelark Well	Quarterly	8/2/2021	4 th Quarter 2021	No	Quarterly per permit condition 01-09-10-PER-003 (e)
Twin Park Well	Annually	8/4/2021	2022	No	
Vanmaren Well (Mercedes)	Annually	8/3/2021	2022	No	
Villaview Well	Annually	8/13/2018	Prior to returning to service	No	

Table 24 - Nitrite Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Over MCL?	Comments
Andrea 02	Triennially	8/3/2021	2024	No	
Andrea Well 01	Triennially	8/4/2021	2024	No	
Carriage Dr. Well	Triennially	8/3/2021	2024	No	
Cherbourg Well	Triennially	8/3/2021	2024	No	
Chipping Way Well	Triennially	8/3/2021	2024	No	
Crosswoods Well	Triennially	8/3/2021	2024	No	
Daly	Triennially	8/3/2021	2024	No	
Diablo Drive Well	Every Nine Years	8/19/2015	2024	No	Standby
Fort Sutter Well	Triennially	8/2/2021	2024	No	
Glass Slipper Well	Triennially	8/2/2021	2024	No	
Halifax (Auburn) Well	Triennially	8/2/2021	2024	No	
Hemlock Well	Triennially	8/2/2021	2024	No	
Laural Oaks Well	Triennially	8/3/2021	2024	No	
Lemans Well	Triennially	8/13/2018	2021	No	
Linda Sue Well	Triennially	8/3/2021	2024	No	
New Rushmore Well	Triennially	8/2/2021	2024	No	
Oak Forrest Well	Triennially	8/4/2021	2024	No	
Roseville Road Well	Triennially	11/18/2021	2024	No	
Shennandoah Well	Triennially	8/2/2021	2024	No	
Summer Place Well	Triennially	3/18/2020	2023	No	
Treelark Well	Triennially	8/17/2020	2023	No	
Twin Park Well	Triennially	8/4/2021	2024	No	
Vanmaren Well (Mercedes)	Triennially	8/3/2021	2024	No	
Villaview Well	Triennially	8/13/2018	2021	No	

Discussion and Appraisal: No chemicals sampled in 2020 above, at, or trending near MCLs. Due to nitrate being less than 50% of the MCL, water system may continue to monitor annually.

Volatile Organic Chemicals (VOC)

Table 25 - VOC's Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Max Detected VOCs	Over MCL?	Comments
Andrea 02	Triennially (Quarterly PCE monitoring)	10/28/2021	2024 (4 th quarter 2021)	PCE 1.4 ug/L 10/28/2021	No	Triennial monitoring required in accordance with <u>§64445.1 (b)(1)</u> Quarterly PCE monitoring required in accordance with <u>§64445.1 (c)(4)</u>
Andrea Well 01	Triennially	8/4/2021	2024	--	No	Triennial monitoring required in accordance with <u>§64445.1 (b)(1)</u>
Carriage Dr. Well	Triennially (Quarterly PCE monitoring)	8/3/2021	2024	PCE 2.3 ug/ 8/4/2021	No	Triennial monitoring required in accordance with <u>§64445.1 (b)(1)</u> Quarterly PCE monitoring required in accordance with <u>§64445.1 (c)(4)</u>
Cherbourg Well	Triennially	8/3/2021	2024	--	No	Triennial monitoring required in accordance with <u>§64445.1 (b)(1)</u>
Chipping Way Well	Triennially	8/3/2021	2024	--	No	Triennial monitoring required in accordance with <u>§64445.1 (b)(1)</u>
Crosswoods Well	Triennially	10/20/2021	2024	--	No	Triennial monitoring required in accordance with <u>§64445.1 (b)(1)</u>
Daly	Triennially (Quarterly PCE monitoring)	8/3/2021	2024 (4 th quarter 2021)	PCE 2.2 ug/L 8/3/2021	No	Triennial monitoring required in accordance with <u>§64445.1 (b)(1)</u> Quarterly PCE monitoring required in accordance with <u>§64445.1 (c)(4)</u>
Diablo Drive Well (Standby)	Every Nine Years	8/19/2015	2024	--	No	Novennial monitoring required in accordance with <u>§64414 (a)</u>
Fort Sutter Well	Triennially	8/2/2021	2024	--	No	Triennial monitoring required in accordance with <u>§64445.1 (b)(1)</u>
Glass Slipper Well	Triennially (Annual TCE monitoring)	10/20/2021	2024 (4 th quarter 2021)	TCE 0.5 ug/L 12/4/2014	No	Triennial monitoring required in accordance with <u>§64445.1 (b)(1)</u> Annual TCE monitoring required in accordance with <u>§64445.1 (c)(4) and email dated 12/8/2021</u>
Halifax (Auburn) Well	Triennially	8/2/2021	2024	--	No	Triennial monitoring required in accordance with <u>§64445.1 (b)(1)</u>
Hemlock Well	Triennially	10/20/2021	2024	--	No	Triennial monitoring required in accordance with <u>§64445.1 (b)(1)</u>
Laural Oaks Well	Triennially	8/3/2021	2024	--	No	Triennial monitoring required in accordance with <u>§64445.1 (b)(1)</u>
Lemans Well	Triennially	8/18/2015	Prior to returning to service	--	No	Triennial monitoring required in accordance with <u>§64445.1 (b)(1)</u>
Linda Sue Well	Triennially	8/3/2021	2024	--	No	Triennial monitoring required in accordance with <u>§64445.1 (b)(1)</u>

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Max Detected VOCs	Over MCL?	Comments
New Rushmore Well	Triennially	8/2/2021	2024	--	No	Triennial monitoring required in accordance with §64445.1 (b)(1)
Oak Forrest Well	Quarterly	10/13/2021	4 th quarter 2021	PCE 1.4 ug/ 10/13/2021	No	Quarterly monitoring required in accordance with permit amendment 01-09-10-PER-003 condition e.
Roseville Road Well	Triennially	10/12/2021	2024	--	No	Triennial monitoring required in accordance with §64445.1 (b)(1)
Shennandoah Well	Triennially	10/20/2021	2024	--	No	Triennial monitoring required in accordance with §64445.1 (b)(1)
Summer Place Well	Triennially (Quarterly PCE monitoring)	10/13/2021	2024(4 th quarter 2021)	PCE 4.3 ug/ 10/13/2021	No	Triennial monitoring required in accordance with §64445.1 (b)(1) Quarterly PCE monitoring required in accordance with §64445.1 (c)(4)
Treelark Well	Quarterly	8/2/2021	2024	PCE 7.7 ug/ 8/2/2021	No	Quarterly monitoring required in accordance with permit amendment 01-09-10-PER-003 condition e.
Twin Park Well	Triennially (Quarterly PCE monitoring)	8/4/2021	2024(4 th quarter 2021)	PCE 1.9 ug/L 8/4/2021	No	Triennial monitoring required in accordance with §64445.1 (b)(1) Quarterly PCE monitoring required in accordance with §64445.1 (c)(4)
Vanmaren Well (Mercedes)	Triennially	8/3/2021	2024	--	No	Triennial monitoring required in accordance with §64445.1 (b)(1)
Villaview Well	Triennially (Quarterly PCE monitoring)	5/9/2019	2022 (4 th quarter 2021)	PCE 1.3ug/L 5/9/2019	No	Triennial monitoring required in accordance with §64445.1 (b)(1) Quarterly PCE monitoring required in accordance with §64445.1 (c)(4)

Discussion and Appraisal: No chemicals sampled above, at, or trending near MCLs. Treelark, Summer Place, and Oak Forrest Wells are treated with GAC to remove PCE.

Monitoring is required triennially if no detections of a VOC in accordance with §64445.1 (b)(1) below.

*Monitoring is required at a minimum annually when chemical is detected in accordance with §64445.1 (c)(4) below.

“§64445.1. Repeat Monitoring and Compliance – Organic Chemicals.

(b) When organic chemicals are not detected pursuant to table 64445.1-A.

(1) A water system which has not detected any of the VOCs on table 64444-A during the initial four quarters of monitoring, shall collect and analyze one sample annually. After a minimum of three years of annual sampling with no detection of a VOC in table 64444-A, a system using groundwater may reduce the monitoring frequency to one sample during each compliance period.

(c) When organic chemicals are detected pursuant to table 64445.1-A.

(4) If the detected level of organic chemicals for any sampling site does not exceed any shown in table 64444-A, the water source shall be resampled every three months and the samples analyzed for the detected chemicals. After one year of sampling an approved surface water system or two quarters of sampling a groundwater system, the State Board will consider allowing the water supplier to reduce the sampling to once per year upon request, based on a review of previous sampling data. Systems shall monitor during the quarter(s) which previously yielded the highest analytical results."

Synthetic Organic Chemicals (SOC)

Table 26 - SOC's Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Over MCL?	Comments
Andrea 02	Triennially*	8/3/2021	2024	No	
Andrea Well 01	Triennially*	8/4/2021	2024	No	
Carriage Dr. Well	Triennially*	8/3/2021	2024	No	
Cherbourg Well	Triennially*	8/3/2021	2024	No	
Chipping Way Well	Triennially*	8/3/2021	2024	No	
Crosswoods Well	Triennially*	8/3/2021	2024	No	
Daly	Triennially*	8/3/2021	2024	No	
Diablo Drive Well	Every Nine Years	8/19/2015	2024	No	
Fort Sutter Well	Triennially*	8/2/2021	2024	No	
Glass Slipper Well	Triennially*	8/2/2021	2024	No	
Halifax (Auburn) Well	Triennially*	8/2/2021	2024	No	
Hemlock Well	Triennially*	8/2/2021	2024	No	
Laural Oaks Well	Triennially*	8/3/2021	2024	No	
Lemans Well	Triennially*	5/4/2021	2024	No	
Linda Sue Well	Triennially*	8/3/2021	2024	No	
New Rushmore Well	Triennially*	8/2/2021	2024	No	
Oak Forrest Well	Triennially*	8/4/2021	2024	No	
Roseville Road Well	Triennially*	10/12/2021	2024	No	
Shennandoah Well	Triennially*	8/2/2021	2024	No	
Summer Place Well	Triennially*	8/2/2021	2024	No	
Treelark Well	Triennially*	8/2/2021	2024	No	
Twin Park Well	Triennially*	8/4/2021	2024	No	
Vanmaren Well (Mercedes)	Triennially*	8/3/2021	2024	No	
Villaview Well	Triennially*	11/6/2018	2021	No	

Discussion and Appraisal: No chemicals sampled above, at, or trending near MCLs. *Two quarters in a year is required, every three years for each source for systems serving over 3,300 persons.
Radiological

Table 27 – Gross Alpha Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Over MCL?	Comments
Andrea 02	Every Nine Years	2/9/2021	2030	No	GA = 1.15
Andrea Well 01	Every Nine Years	2/9/2021	2030	No	GA = 1.07
Carriage Dr. Well	Every Six Years	2/9/2021	2027	No	GA = 3.69
Cherbourg Well	Every Six Years	2/9/2021	2027	No	GA = 3.73
Chipping Way Well	Every Nine Years	2/9/2021	2030	No	GA = 3.1
Crosswoods Well	Every Nine Years	2/9/2021	2030	No	GA = 1.38
Daly	Every Nine Years	2/10/2021	2030	No	GA = 1.1
Diablo Drive Well	Every Nine Years	3/15/2012	2021	No	GA = 0
Fort Sutter Well	Every Nine Years	2/10/2021	2030	No	GA = 2.26
Glass Slipper Well	Every Six Years	5/5/2021	2037	No	GA = 3.33
Halifax (Auburn) Well	Every Nine Years	2/17/2021	2030	No	GA = 1.72
Hemlock Well	Every Nine Years	2/18/2021	2030	No	GA = 2.69
Laural Oaks Well	Every Nine Years	2/9/2021	2030	No	GA = 2.53
Lemans Well	Every Nine Years	2/18/2021	2030	No	GA = 1.33
Linda Sue Well	Every Nine Years	2/9/2021	2030	No	GA = 1.45
New Rushmore Well	Every Nine Years	2/9/2021	2030	No	GA = 1.41
Oak Forrest Well	Every Nine Years	3/18/2021	2030	No	GA = 1.65
Roseville Road Well	Every Nine Years	2/9/2021	2030	No	GA = 0.713
Shennandoah Well	Every Nine Years	2/10/2021	2030	No	GA = 1.41
Summer Place Well	Every Nine Years	2/17/2021	2030	No	GA = 1.64
Treelark Well	Every Nine Years	2/10/2021	2030	No	GA = 0.792
Twin Park Well	Every Six Years	2/17/2021	2037	No	GA = 3.64
Vanmaren Well (Mercedes)	Every Nine Years	2/5/2020	2029	No	GA = 1.6
Villaview Well	Every Nine Years	9/22/2015	2024	No	GA = 0

GA = gross alpha (pCi/L)
GA gross alpha counting error (pCi/L)
UR = uranium.

Discussion and Appraisal: Frequency and the radiological chemicals required to be monitored are determined based on Article 5. Radioactivity §64442. MCLs and Monitoring listed below. Gross alpha (minus uranium/radium) MCL = 15 pCi/L. DLR = 3 pCi/L

"Article 5. Radioactivity §64442. MCLs and Monitoring - Gross Alpha Particle Activity, Radium-226, Radium-228, and Uranium

(f) A gross alpha particle activity measurement may be substituted for other measurements by adding the 95% confidence interval (1.65σ , where σ is the standard deviation of the net counting rate of the sample) to it; and if,

(1) For uranium and radium measurements (after initial radium-228 monitoring has been completed), the gross alpha measurement does not exceed 5-pCi/L; or

(2) For radium measurements (after initial radium-228 monitoring has been completed), the result obtained from subtracting the uranium measurement from the gross alpha measurement does not exceed 5-pCi/L."

In addition, radiological monitoring should occur per the following frequency:

"(d) After initial monitoring, each system shall monitor for each radionuclide at each sampling site at a frequency determined by the monitoring result(s) [single sample result or average of sample results if more than one sample collected] from the most recent compliance period as follows:

(4) If the single sample result or average is:

A. Below the DLR, the system shall collect and analyze at least one sample every nine years (3 compliance periods).

B. At or above the DLR, but at or below $\frac{1}{2}$ the MCL, the system shall collect and analyze at least one sample every six years.

C. Above $\frac{1}{2}$ the MCL, but not above the MCL, the system shall collect and analyze at least one sample every three years."

PFAS

Table 28 - PFAs Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Over MCL?	Comments
Andrea 02	--	--	--	N/A	--
Andrea Well 01	--	--	--	N/A	--
Carriage Dr. Well	--	--	--	N/A	--
Cherbourg Well	--	--	--	N/A	--
Chipping Way Well	--	--	--	N/A	--
Crosswoods Well	--	--	--	N/A	--
Daly	--	--	--	N/A	--
Diablo Drive Well	--	--	--	N/A	--
Fort Sutter Well	Triennially	8/2/2021	2024	N/A	--
Glass Slipper Well	--	--	--	N/A	--
Halifax (Auburn) Well	--	--	--	N/A	--
Hemlock Well	Quarterly	8/2/2021	4 th quarter 2021	N/A	PFOA = 3.7 ng/L PFOS = 7.7 ng/L PFBS = 2.3 ng/L
Laural Oaks Well	--	--	--	N/A	--
Lemans Well	--	--	--	N/A	--
Linda Sue Well	--	--	--	N/A	--
New Rushmore Well	--	--	--	N/A	--
Oak Forrest Well	--	--	--	N/A	--
Roseville Road Well	--	--	--	N/A	--
Shennandoah Well	--	--	--	N/A	--
Summer Place Well	--	--	--	N/A	--
Treelark Well	--	--	--	N/A	--
Twin Park Well	--	--	--	N/A	--
Vanmaren Well (Mercedes)	--	--	--	N/A	--
Villaview Well	--	--	--	N/A	--

Discussion and Appraisal: PFAS monitoring includes 18 chemicals: PFBS, PFNA, PFDA, PFTA, HFPO-DA, ADONA, PFHpA, PFDoA, PFTrDA, PFOS, PFHxS, PFHxA, PFUnA, PFOA, N-ETHYL PERFLUOROOCTANESULFONAMIDOACETIC ACID, 9-CHLOROHEXADEC AFLUORO-3-OXANONE-1-SULFONIC ACID, N-METHYL PERFLUOROOCTANESULFONAMIDOACETIC ACID, 11-CHLORO EICOSAFLUORO-3-OXAUNDECANE-1-SULFONIC ACID

On March 2019, the Division of Drinking Water issued Health and Safety Code 116400 Orders to 600 water system sites.

In addition the Division of Drinking Water issued a general order (DW2020-0003-DDW) dated September 4, 2020, for additional PFAs monitoring. Monitoring is required beginning 4th Qtr. 2020 and continuing quarterly until further notice. Fort Sutter and Hemlock require quarterly monitoring. PFOA notification level = 5.1 ppt, response level 10 ppt. PFOS notification level = 6.5 ppt, response level = 40 ppt. PFBS notification level = 0.5 ppb, response level = 5 ppb.

Per Division email dated November 3rd, 2021, Fort Sutter to monitor triennially for PFOAS, Hemlock to monitor quarterly.

DISINFECTION BYPRODUCTS RULE

California Code of Regulations, Title 22, Chapter 15.5: Disinfectant Residuals, Disinfection Byproducts, and Disinfection Byproducts Precursors

Stage 2 D/DBP Rule

Table 29 - DBPs Monitoring Summary

TTHM (ug/L)	2nd Quarter 2020 5/5	3rd Quarter 2020 8/5	4ty Quarter 2020 11/4	1st Quarter 2021 2/3	2nd Quarter 2021 5/3	LRAA
Site 1 - 7379 Sandalwood Dr	0.0	0.0	0.0	26.1	0.0	7.0
Site 2 - 8205 Summerplace Dr	0.0	0.0	0.0	0.0	0.0	0.0
Site 3 - 7726 Saybrook Dr	0.0	0.0	0.0	0.0	0.0	0.0
Site 4 - 8012 Katella Wy	0.0	0.0	0.0	0.0	0.0	0.0

HAA5 (ug/L)	2nd Quarter 2020 5/5	3rd Quarter 2020 8/5	4ty Quarter 2020 11/4	1st Quarter 2021 2/3	2nd Quarter 2021 5/3	LRAA
Site 1 - 7379 Sandalwood Dr	0.0	0.0	0.0	22.0	0.0	6.0
Site 2 - 8205 Summerplace Dr	0.0	0.0	0.0	0.0	0.0	0.0
Site 3 - 7726 Saybrook Dr	0.0	0.0	0.0	0.0	0.0	0.0
Site 4 - 8012 Katella Wy	0.0	0.0	0.0	0.0	0.0	0.0

LEAD AND COPPER RULE

California Code of Regulations, Title 22, Chapter 17.5: Lead and Copper

Program Description: Water System collects distribution system lead and copper samples pursuant to California Code of Regulations, Title 22, Division 4, Chapter 17.5. Historic summary of all lead and copper monitoring is tabulated in table below.

Number of samples required: 30

Number of samples taken: 30

90th Percentile Copper Action Level: 1.3 mg/L (1,300 ppb) (Section 64675.5 (a) (1))

90th Percentile Lead Action Level: 0.015 mg/L (15 ppb) (Section 64675.5 (a) (1))

Table 30 – Historic Lead and Copper Monitoring Summary

Round	Date	No. Samples Required / Collected	90% Lead (ppm)	90% Copper (ppm)
1	05/25/1993	60 / 67	<5	600
2	09/21/1993	60 / 61	<5	720
3	06/21/1994	30 / 37	<5	660
4	12/11/1998	30 / 30	<5	590
5	09/30/2001	30 / 31	<5	550
6	07/02/2004	30 / 30	<5	673
7	08/27/2007	30 / 30	<5	498
8	09/04/2010	30 / 30	<5	387
9	06/25/2013	30 / 30	<5	560
10	09/27/2016	30 / 30	<5	303
11	06/18/2019	32 / 30	<5	397

Discussion and Appraisal: The next round of monitoring is due June - September 2022.

CONSUMER CONFIDENCE REPORT

California Code of Regulations, Title 22, Chapter 15, Article 20: Consumer Confidence Report

Send Date/Anticipated Send Date: May 19, 2021

Certification Form received: by October 1, 2021

Copy received by the Division: ☒ Yes ☐ No ☐ Unknown

Discussion and Appraisal: CCR reporting was completed as required.

K. OPERATION AND MAINTENANCE

CROSS-CONNECTION CONTROL PROGRAM

Program Description: California-American Water Company operates its own backflow testing program

Cross-connection control program coordinator: Oscar Garcia

Certification Number: AWWA 03236

Cross-connection control ordinance:

Ordinance Date: December 18, 2018

Copy received by the Division: ☒ Yes ☐ No ☐ Unknown

Table 31 – Cross connection testing

Year	Total Devices	Air Gaps	Newly Installed	No. Tested	No. Failed	No. Repaired/ Replaced	Inactive
2018	411	0	27	403	29	42	0
2019	442	0	31	418	18	36	0
2020	443	0	6	381	3	3	19

Discussion and Appraisal: Reportedly, “Due to Covid 19, many businesses were closed and did not complete 2020 annual testing. Testing resumed early 2021”.

CUSTOMER COMPLAINT PROGRAM

Program Description: California-American Water Company personnel investigate all complaints as they are reported. Responses to the complaints vary based on investigation findings. Summary of consumer complaints below

Table 32 - Summary of customer complaints

Type	Year		
	2018	2019	2020
Taste and Odor	9	9	12
Color	6	4	4
Turbidity	6	8	6
Worms and Other Visible Organisms	0	0	0
Pressure (High or Low)	0	0	0
Water Outages	0	0	0
Illness (Waterborne)	0	0	0
Other	14	15	9
Total	35	36	31

Discussion and Appraisal: California-American Water Company reports that service personnel are dispatched to investigate complaints.

L. EMERGENCY RESPONSE PROGRAM

Emergency Notification Plan (ENP):

Plan Date: February 22, 2019

Copy received by the Division: ☒ Yes ☐ No ☐ Unknown

Emergency Response Plan (ERP):

Plan Date: October 26, 2020

Copy received by: ☒ Yes ☐ No ☐ Unknown

Discussion and Appraisal: The Water System's Emergency Notification and Emergency Response plan is up-to-date.

DEAD END FLUSHING PROGRAM

California Code of Regulations, Title 22, Chapter 16, Article 4: Materials and Installation of Water Mains and Appurtenances

Program Description: The Water System has a valve-exercising program

Approximate number of valves: 3,755

Total number of valves exercised in 2020: 600

Size Range of the valves: 2-inch to 20-inch

Valve exercising frequency: Reportedly, system operators exercise all valves every 5-7 years.

DISTRIBUTION SYSTEM FLUSHING PROGRAM

California Code of Regulations, Title 22, Chapter 16, Article 4: Materials and Installation of Water Mains and Appurtenances

Program Description: The Water System has a flushing program

Approximate number of dead ends: 250

Total number of valves exercised in 2020: 0

Percent with flushing valves: 100

Flushing frequency: Reportedly, Water System operators flush the distribution system as needed.

M. Vulnerability Assessment

a. Fire:

Is Defensive Space of 100-feet (California Public Resources Code 4291) maintained around all structures owned, operated, and managed by the Community Water System? X Yes No

Discussion and Appraisal: California Public Resources Code 4291 applies to properties that are "upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material". Staff are aware of defensible space requirements and facilities appeared to be maintained. Water System reported no concern to Fire on the 2020 electronic water system annual report.

J. Flooding:

Has the water system had a history of flooding? Yes X No

Are any of the drinking water facilities owned, operated, and managed by the Community Water System vulnerable to flooding? Yes X No

Discussion and Appraisal: The Division records do not demonstrate any history of flooding. Facilities per the Department of Water Resources Best Available Flood Maps online tool are outside of 100 year flood risk areas. Water System did not report concern to flooding on the 2020 electronic water system annual report.

i. Drought:

Has the water system had any history of drought related shortages and/or outages? Yes X No
Is water system prepared for drought related shortages or outages? (Interties, backup supply, increased storage, etc.) X Yes No

Discussion and Appraisal: There are measures in place such as water conservation measures, drought contingencies, storage, and customer outreach measures relating to drought shortages. Water System reported no concern to drought on the 2020 electronic water system annual report.

ii. **Backup Power**

Is backup power available via portable generators or permanent generators? X Yes No N/A

Discussion and Appraisal: There is backup power available at some facilities.

Discussion and Appraisal: All generators are tested at least monthly.

K. OVERALL SYSTEM APPRAISAL

Permit is up to date and conditions are being followed. Valves and dead ends are exercised/flushed. Customer complaints are being addressed. Repairs to distribution system are being made, backflow devices are being tested. Source and distribution monitoring is in compliance. Operators meet certification requirements. Plans (BSSP, DBP, ENP) are up to date.

L. APPENDICES

Appendix A Compliance Inspection Findings

Appendix B Inspection Photos

Appendix C Tank coordinates

Report Prepared By:

Bryan Rinde
Bryan Rinde, P.E.
Water Resources Control Engineer

December 13, 2021
Date

Appendix A - Compliance Inspection Findings

Public Water System Name: California-American Water Company – Lincoln Oaks Water System

Public Water System Number: 3410013

Item No.	Description of Finding	Response Deadline
--	No deficiencies identified during inspection with California Code of Regulations Title 17 and Title 22 regulations.	--

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Andrea 02 Well



1 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Andrea Well 01



2 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Halifax (Auburn) Well



3 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Carriage Drive Well



Chipping Way Well



4 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Crosswoods Well



5 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Diablo Drive Well



6 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Fort Sutter Well



7 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Glass Slipper Well



8 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Hemlock Well



9 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Laural Oaks Well



10 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Le Mans Well



11 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Linda Sue Well



12 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

New Rushmore Well



Oak Forest Well



13 of 28

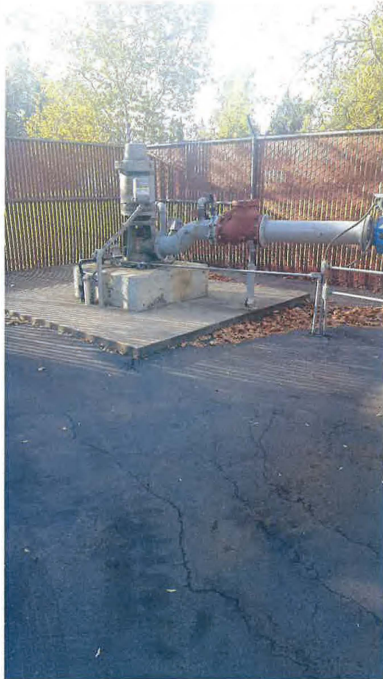
Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)



14 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Roseville Well



15 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Shennandoah Well



16 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Treelark Well



17 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)



18 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Twin Park Well



19 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Van Maren Well



20 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Villaview Well



21 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Cherbourg Well



22 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Summer Place Well



23 of 28

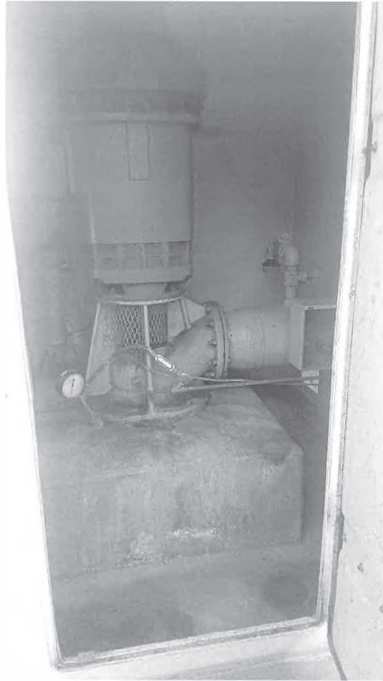
Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)



24 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Daly Well



25 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Roseville Road Reservoir



26 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)

Lincoln Oaks Reservoir



27 of 28

Appendix B – Compliance Inspection Photos (By Bryan Rinde 10/06/2021)



28 of 28

Appendix C - Tanks

Water System	Water System Number	Tank Name	Size (MG)	Longitude	Latitude
Roseville Road Reservoir	3410013	Welded Steel Tank	2	38.71773632	-121.314633
Lincoln Oaks Reservoir	3410013	Welded Steel Tank	1.5	38.64979307	-121.307972

Confidential locational information.



State Water Resources Control Board
Division of Drinking Water

January 8, 2016
System No.: 2410008

Mr. Dave Walker, CEO
Meadowbrook Water Company
2272 Meadowbrook Avenue
Merced, CA 95348

RE: 2015 Water System Sanitary Survey Report

Dear Mr. Walker:

On September 24, 2015, Ms. Shavonne Stallworth met with Ms. Connie Farris to inspect the Meadowbrook Water Company (Company) water system. The purpose of this letter is to inform you of items requiring action which were noted during the inspection and subsequent water quality review:

1. The 2015 result was not the first time that Well No. 6 has had a nitrate result over 23.0 mg/L; however, with Company has not conducted the required quarterly monitoring for one year in the past. Therefore, the Company must collect the first quarterly nitrate sample by **January 31, 2016**.
2. By **January 31, 2016**, the Company needs to fill out the ENP template and return it to the Division.
3. By **January 31, 2016**, the Company needs to submit a hard copy of the distribution system asbestos result to the Division and electronically to the primary station code (PS Code) 2410008-901.
4. By **March 31, 2016**, the Company needs to submit a plan and time schedule for when Well No. 2 and the abandoned well at Well Site No. 5 will be properly destroyed.
5. The Division recommends that a cross-connection control survey is conducted at least once every 5 years; therefore, the next cross-connection control survey is due in 2016.

FELICIA MANGIUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

265 West Butland Avenue, Suite 101, Fresno, CA 93704 | www.waterboards.ca.gov

Meadowbrook Water Company
January 8, 2016
Page 2

If you have any questions regarding this letter or corresponding sanitary survey report, please contact Shavonne Stallworth at (559) 447-3306.

Sincerely,



Kassy D. Chauhan, P.E.
Senior Sanitary Engineer
Central California Region
SOUTHERN CALIFORNIA BRANCH
DRINKING WATER FIELD OPERATIONS

Enclosures

cc: Merced County Environmental Health Department (w/o attachments)



State Water Resources Control Board

Division of Drinking Water

TO: Kassy D. Chauhan, P.E.
Senior Sanitary Engineer
Merced District

FROM: Shavonne Stallworth, E.I.T.
Sanitary Engineer
SOUTHERN CALIFORNIA BRANCH
DRINKING WATER FIELD OPERATIONS

DATE: January 7, 2015

SUBJECT: Meadowbrook Water Company
System Number: 2410008
2015 Water System Sanitary Survey

I. INTRODUCTION

On September 24, 2015, Division staff inspected the Meadowbrook Water Company (Company) water system and its operations. During the inspection, Ms. Connie Farris, Operations Manager accompanied Division staff on the inspection. The Water System was last inspected by Mrs. Lourdes Mertens of our office in May 2012. The findings of the 2012 inspection along with their current status are summarized below:

1. There is only one non-threaded sample tap that can be used to collect samples from Well No. 4 and it is located downstream of the chlorine injection port. The Company must relocate the non-threaded sample tap to a location between the wellhead and the check valve and must be upstream of the chlorine injection port. Submit proof of work completed by August 30, 2012.

Status: The sample tap was relocated between the wellhead and check valve upstream of the chlorine injection.

2. The Company must continue submitting well production reports to the Department on a monthly basis.

Status: The Company submits the required monthly production.

3. The Company must submit a Chlorination Operations Plan to the Department for review and approval by August 30, 2012.

Status: The Company submitted a Chlorination Operations Plan by the required date.

4. The Company's Emergency Notification Plan (ENP) that is on file with the Department, dated May 26, 2008, is in need of a revision. Two of the designated contacts in the Plan

ELLIE MAHON, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

285 West Bullard Avenue, Suite 101, Fresno, CA 93703 | www.waterboards.ca.gov

are no longer working for the Company. The Company must complete the attached Emergency Notification Plan template with a description of the Company's method of notification and submit by August 30, 2012.

Status: The Company updated the ENP by the required date.

5. A review of the system file also revealed that there was no Emergency Disaster /Response Plan was submitted for the Company. The Company must prepare an Emergency Disaster/Response Plan and submit it to the Department for approval by August 30, 2012. An Emergency Disaster/Response Plan template is available at the CDPH's Drinking Water Program website:
<http://www.cdph.ca.gov/certlic/drinkingwater/Pages/TMF.aspx>

Status: The Company submitted the Emergency Response Plan by the required date.

6. The most recent cross-connection control survey was performed in December 2011. The Department recommends that a cross-connection control survey is conducted at least once every 5 years.

Status: The next cross-connection control survey is recommended to be completed in 2016.

7. The Company must comply with the attached water quality monitoring schedule for all of its active wells. All water quality monitoring results obtained in a calendar month must be submitted to the Department via electronic data transfer (EDT) by the tenth day of the following month.

Status: The Company complies with the required water quality monitoring schedule and date of submittal.

8. The Department recommends that the Company continue to test all of its active wells for hexavalent chromium on annual basis and include any detected results in the Company's yearly Consumer Confidence Report (CCR) to its customers.

Status: The initial monitoring for hexavalent chromium was completed in 2014. Total chromium monitoring is now required once every three years.

9. In March 2008, the Company began the process of compliance with the Stage 2 DPBR. The Company was approved for a 40/30 certification which satisfied the Initial Distribution System Evaluation (IDSE) requirement for the Stage 2 DBPR. Before the deadline date of October 1, 2013, the Company is required to complete a Stage 2 DBPR monitoring plan and submit it to the Department for approval. Once approve, the Stage 2 DBPR monitoring plan will replace the Stage 1 DBPR plan. Additional information on Stage 2 DBPR compliance monitoring will be provided at the beginning of 2013.

Status: The Company is currently conducting the required annual ST2 DBPR monitoring.

10. Upon review, it has been determined that the Company has not collected an asbestos sample from the distribution system. The Company shall collect an asbestos sample

from a tap served by an AC main during the month of July 2012. The results shall be submitted to the Department for review no later than September 10, 2012.

Status: The division does not have a copy of the asbestos result. The Company needs to submit a hard copy of the distribution system asbestos result to the Division and electronically to the primary station code (PS Code) 2410008-901. The Division has named this location ASB-Hudson, to reflect the distribution system location where this sample is collected.

1.1 PERMIT COMPLIANCE

The Meadowbrook Water Company operates under a revised domestic water supply permit (No. 03-11-09P-004) that was issued by the Division (formerly California Department of Public Health) on February 25, 2009. The revised permit contains the following six permit provisions:

1. The only approved sources of supply are listed in the table below.

Source Name	Operating Status	Primary Station Code
Well 04	Active – Raw	2410008-004
Well 05	Active – Raw	2410008-005
Well 06	Active – Raw	2410008-010

2. Well No. 6 must be sampled for two more quarters for gross alpha activity and uranium with at least one more quarter for radium 228 in 2009 to complete the initial monitoring requirements for a new source.
3. The Water Company shall monitor once for asbestos in 2009 from the sample site served by asbestos-cement pipe that is located in the distribution system based on the change in the aggressiveness index of the water produced by Wells Nos. 4 and 5.
4. The water system is classified as a Class D2 distribution system in accordance with Title 22 of the California Code of Regulations since continuous chlorination is provided. The minimum certification levels of the chief and shift operator are D2 and D1, respectively. The water system must employ adequately qualified operators at all times.
5. All the active wells are equipped and approved for continuous chlorination treatment. The Water Company shall monitor the raw water produced by each well monthly for total coliform, E. coli or fecal coliform and heterotrophic bacteria prior to chlorination. The sample results shall enumerate bacteriological densities (not presence or absence test methods). Wells that are not in active operation during certain months of the year are not required to be monitored, but must be sampled prior to being placed into operation. Positive bacteriological results shall require corrective actions be taken to eliminate the source of contamination before the well is placed back into service unless approval is obtained from the Merced Company Office of the DWFOB.
6. The Water Company must measure and record chlorine residuals from throughout the distribution system and submit a monthly well chlorination report to the Merced Company Office of the DWFOB.

The Company is in compliance with all of the permit provisions.

1.2 DESCRIPTION OF THE SYSTEM

The mailing address for the Company's water system is 2272 Meadowbrook Avenue, Merced, CA 95340.

The Company serves the unincorporated community of Franklin/Beachwood area and is classified as a community water system. According to the 2014 Annual Report submitted to the Division, the Company serves a permanent population of approximately 6,309 persons through 1,603 metered residential service connections. In addition, the Company serves 58 industrial/commercial service connections within its boundaries. Currently, there are 49 service connections that are inactive. The Company is sewered and serviced by the Franklin County Water District. Sewage disposal of some residential properties located in the outer limits of the Company is provided by individual septic systems with leach lines.

1.3 ENFORCEMENT HISTORY

Since the last inspection in 2012, there has been no enforcement action issued against the Company.

1.4 AREA SERVED

The Company serves the unincorporated community of Franklin/Beachwood area which is located just east of the City of Merced. In addition to its residential customers, the Company serves two elementary schools, three mobile home parks, one migrant housing facility, a meat packaging company, small retail businesses and three cement mixing plants. In the future additional housing and a school are planned to be built in the Company's service area. The geographic area of the Company is about 3.5 square miles.

The Company has an agreement in place to sell the water system to Cal American Water Company. At this time there is no timeline or specific date when the changes of ownership will occur. Although, when a plan or timeline is established of when the change of ownership will take place, Cal American Water Company will need to submit an amended permit application for the change in ownership of the water system.

II. INVESTIGATION OF FINDINGS

2.1 GROUNDWATER SOURCES OF SUPPLY

There have been a total of six wells drilled within the Company. Two of these wells have been destroyed (Well Nos. 1 and 3). The Company has Well No. 2 as inactive and Well Nos. 4, 5 and 6 as active. Well No. 2 was inactivated due to high levels of nitrates.

The wells are all equipped with a housed chlorination system that continuously treats the water with a solution of sodium hypochlorite prior to entering the pressure tanks. The chlorination system is comprised of a 100-gallon disinfectant storage tank and an injection pump with a capacity of 2.77 gph at 101 psi, at each site. All well sites have a housed chlorination system that continuously treats the water with a solution of sodium hypochlorite prior to entering the pressure tanks.

Well No. 4 (Active Raw)

Well No. 4 (PS Code 2410008-004) was drilled in 1992 to a depth of 371 feet by the reverse rotary method. The well has a 24-inch diameter steel conductor casing from 0 to 18 feet and a 16-inch diameter steel casing from 0 to 371 feet. The steel casing is screened from 210 to 235 feet and 295 to 371 feet. The well has a cement annular seal to a depth of 200 feet and a gravel pack from 200 to 371 feet. The Well Driller's Report is on file. The 5 feet by 5 feet by 12 inch concrete pedestal contains a sounding tube and casing vent that is properly screened and downturned. The well sites are equipped with a transfer switch ready to accept auxiliary power when needed.

Well No. 4 is equipped with a 150-HP electric motor and a water-lubricated vertical turbine pump capable of producing 2,000 gpm. The electric motor is controlled by a variable-frequency drive (VFD). The discharge piping includes an air-release valve, check valve, water lubrication source piping, a flow meter, an injection port for chlorination, hose bib, a non-threaded sample tap and three pressure tanks with an effective storage volume of 39,000-gallons. The well discharges to directly the three pressure tanks that then discharge water to the distribution system as the system pressure drops. Well No. 4 is located about 1,000 feet from the Franklin County Water District's aeration ponds.

Well No. 5 (Active Raw)

Well No. 5 (PS Code 2410008-005) was drilled to a depth of 528 feet in 2001 using the reverse rotary drilling method. The Well Driller's Report is on file. The well has a 16-inch diameter steel casing from 0 to 528 feet. The steel casing is screened from intervals 307 to 325 feet, 355 to 365 feet, 400 to 410, 455 to 470 and 480 to 490 feet below the surface. The well has a cement annular seal to a depth of 275 feet. No mention of a gravel pack below the annular seal on the Well Driller's Report. The 2.5 feet by 2.5 feet by 12 inch concrete pedestal contains casing vent that is properly screened and downturned.

Well No. 5 is equipped with a 60-HP electric motor and a water-lubricated vertical turbine pump capable of producing 630 gpm. The electric motor is controlled by a variable-frequency drive (VFD). The discharge piping includes an air-release valve, check valve, water lubrication source piping fitted with a non-threaded sample tap and a hose bib, pump to waste piping with a gate valve, a flow meter, an injection port for chlorination and two pressure tanks with an effective volume of 24,750-gallons. The well discharges directly to two pressure tanks that then discharge water to the distribution system as the system pressure drops. This well was drilled as a replacement of Well No. 3, which was destroyed in 2001. The well is about 100 feet away from a sewer line and about 35 feet from the destroyed Well No. 3.

Well No. 6 (Active Raw)

Well No. 6 (PS Code 2410008-010) was drilled in 2007 to a depth of 376 feet by the reverse rotary method. The well contains a 24-inch diameter galvanized steel conductor casing to a depth of 20 feet and a 16-inch diameter steel casing from 0 to 376 feet. The casing is screened from intervals 222 to 226, 254 to 256, 266 to 270, 282 to 284 and 356 to 370 feet below the surface. The well has a cement annular seal to a depth of 210 feet. No mention of a gravel pack below the annular seal on the Well Driller's Report. The 4 feet by 4 feet by 12

inch concrete pedestal contains a sounding tube and casing vent that is properly screened and downturned.

The well is equipped with a 75-HP electric motor and a water-lubricated vertical turbine pump. The motor has a variable frequency drive (VFD) and is capable of producing up to 1,200 gpm. The well discharge piping includes an air release valve, a non-threaded sample tap, a check valve, water lubrication source piping, flow meter, disinfectant injection point and one pressure tank. The well discharges directly to the single pressure tank at this well site; then the pressure tank discharges water to the distribution system as the system pressure drops. The nearest sewer line is about 100 feet away from the wellhead.

Inactive Sources

Well No. 2

Well No. 2 was drilled in 1960 to a depth of 141 feet. The depth of the annular seal is unknown. According to March 2003 permit amendment this is an open bottom well. This well was inactivated in 2007 due to nitrate levels the exceeded the MCL. There are no actual well components (pump, motor, bowls, etc.) at this time. Therefore, by March 31, 2016, the Company needs to submit a plan and time schedule for the future of this source as part of the system.

2.2 ADEQUACY OF SUPPLY

According to the Waterworks Standards, maximum day demand (MDD) is to be determined by the water production records. Table 1 is the last five years of production data from Wells Nos. 4, 5 and 6 submitted to the Division in the electronic annual report.

Table 1 – Production (Million Gallons)

Year	Annual Total	Maximum Month
2014	346.2	47/August
2013	400.3	49/August
2012	--	62/August
2011	487.2	--
2010	268.9	56/July

The Company did not provide the annual production for 2012 and the maximum month production for 2011 in the electronic annual report. The year with the highest annual production in the last five years is 2011. The average day, maximum day and peak hour demands are listed in Table 2. According to the California Waterworks Standards, the maximum day demand (MDD) was calculated using production data and a peaking factor of 1.5. The peak hour demand (PHD) was calculated using the maximum day demand and a peaking factor of 1.5.

Table 2 - Water Demand (gpm)

<i>Year</i>	<i>Avg. Day (gpm)</i>	<i>Max. Day (gpm)</i>	<i>Peak Hour (gpm)</i>
2014	658.7	1,052.9	1,579.3
2013	761.6	1,142.4	1,713.6
2012	925.9*	1,388.9*	2,083.3
2011	926.9	1,390.4	2,085.6
2010	511.6	1,254.5	1,881.7

*Based on an estimate, since the annual production for 2012 was not provided.

However, based on Tables 1 and 2, the highest calculated maximum day production in the last five year occurred in 2011; therefore, the average day, maximum day and peak hour demand are 926.9, 1,390.4 and 2,085.6 gpm. Table 3 summarizes the source capacity of each well.

Table 3 - Total Active Source Capacity

Source	Capacity (gpm)
Well No. 4	2,000
Well No. 5	630
Well No. 6	1,160
Total Capacity	3,790

The Company's total source capacity is 3,790 gpm. Thus, the Company's sources are able to provide enough capacity to meet all of the Company's demands. According to the California Waterworks Standards, a public water system serving less than 1,000 service connections should have storage capacity equal to or greater than the maximum day demand, unless the system can demonstrate that it has an additional source of supply or has an emergency connection that can meet the maximum day demand requirement. There are no storage facilities in the water system, this requirement is not met. It is recommended that the Company to provide additional storage for maximum and peak demands.

2.3 TREATMENT

The Company has chlorination stations that continuously chlorinate the water pumped from Wells Nos. 4, 5 and 6. These chlorination stations, located at their respective well sites, consist of an injection pump (Prominent Delta) and disinfectant storage tank inside a permanent housing enclosure. Each chlorination station uses NSF/ANSI standard 60-certified 12.5 % sodium hypochlorite solution which is diluted down to 2% concentration. The Company typically maintains a chlorine residual ranging from 0.15-0.47 mg/L. The Company submitted the Chlorination Operations Plan as required by the 2012 sanitary survey report, the plan is not dated. The Division hereby approves the Chlorination operations plan and the Company is required to operate the continuous chlorination treatment in accordance with this plan.

2.4 STORAGE

The Company does not have any storage tanks. The Company uses hydropneumatic tanks to provide system pressure. The capacities of the pressure tanks are summarized below:

Table 4 - Pressure Tanks

Well Site	Tank Size	Effective Storage Volume
Well No. 4	(2) 22,500 gallons	22,500 gallons
Well No. 4	33,000 gallons	16,500 gallons
Well No. 5	16,500 gallons	8,250 gallons
Well No. 5	33,000 gallons	16,500 gallons
Well No. 6	16,500 gallons	8,250 gallons
	TOTAL	72,000 gallons

All pressure tanks have an air relief vent on the top of each tank that is properly screened.

2.5 DISTRIBUTION SYSTEM

The distribution system piping consists of asbestos-cement (AC), ductile iron and C-900 PVC pipes which range in size from 4-inch to 12-inch diameters. There are 4 dead ends present in the system which are flushed twice a year. In addition, there are 366 valves present in the system which are exercised once a year.

Waterline breaks and main repairs are performed by Rolse Construction. Most main breaks are repaired under pressure with the use of clamps. The Company follows AWWA standards for main disinfection and flushing. Prior to the main being placed into service, the Company collects a special bacteriological sample which the results are submitted to the Division.

The Company has approximately 126 fire hydrants within the distribution system. The Merced County's Fire Department flushes all of the hydrants annually.

2.6 OPERATION AND MAINTENANCE

The Chief Executive Officer for the Company is David Walker who is responsible for oversight of the water system. The Company's distribution system is classified as a D2 system. As such, the Company is required to have a chief operator certified at D2 and a shift operator certified as a D1. Mr. Walker is a Grade D2 chief distribution certified operator. Ms. Connie Farris is the Operations Manager and holds a Grade D2 distribution system certification. The Company meets the requirements for certified distribution system operators. The Company is not required to have a certified treatment operator.

An operator visits each of the well sites on a daily basis, five days per week. During the daily site visits, the operator reads the hour meter, the flow meter, the pressure gauge and collects a chlorine residual reading. During the operators visit, the well sites are visually inspected for equipment operation and routine maintenance that may need to be conducted on the wells.

2.7 CROSS-CONNECTION CONTROL PROGRAM

The most recent cross-connection control survey was performed in December 2011. The 2014 Annual Report indicates that the designated cross-connection control program coordinator is Ron Grissom, Certification Number 01034. According to the 2014 Annual Report, the Company has a total of 55 backflow prevention assemblies in the system. Only

51 backflow devices were tested in 2014, with 49 devices that passed and two devices that were repaired. Four devices were not tested as they were not in operation.

The Division recommends that a cross-connection control survey is conducted at least once every 5 years; therefore, the next cross-connection control survey is due in 2016.

2.8 COMPLAINTS

According to the submitted Annual Reports, the Company received five complaints in 2014. The two complaints were about turbidity caused by air in the water line, and three complaints about low pressure caused by valves not being fully opened. All complaints were investigated by the Company.

In the event that a complaint by a customer is received, available staff will investigate and resolve the problem as soon as possible. The Company must continue to record each complaint received and report that information to the Division in the electronic Annual Report each year.

2.9 EMERGENCY NOTIFICATION AND DISASTER/RESPONSE PLAN

The Company's Emergency Notification Plan (ENP) on file is dated June 5, 2014. According to the Company's 2014 ENP, David Walker, Connie Farris and Kelly Barrows are listed as the water system emergency contacts. However, Ms. Kelly Barrows no longer works with the Company, there was not a plan attached indicating how customers will be notified in the event of a water quality emergency. Therefore, the Company needs to submit an updated ENP with the replacement for Kelly and/or the Company may choose to not add another contact at this time. Also, a plan needs to be attached that indicates how customers will be notified in the event of a water quality emergency and how long it will take to complete the required notifications. Attachment B is an ENP template, please fill out and return to the Division by January 31, 2016.

2.10 CONSUMER CONFIDENCE REPORTS (CCR)

The Company is required to submit a CCR to each customer in their water system by July 1st of each year. The Company submitted a copy of its 2014 CCR to the Division with a certification letter on April 6, 2015, via electronic upload on the Division's. The report was prepared in accordance to the required regulations.

2.11 WATER QUALITY AND MONITORING

Based on the size and population of the water system, the Company is required to all water quality monitoring based on the community water system serving a population greater than 3,300 in an agricultural area (CLGA). Attachment C is a copy of the CLGA water quality monitoring schedule. Also, a copy of the last sample next due monitoring schedule is attached in Attachment C.

General Mineral, General Physical and Inorganic Chemicals

The Company is required to monitor all active sources for general mineral, general physical and inorganic chemicals once every three years after the initial monitoring is complete. Initial

monitoring consists of four consecutive quarters of monitoring with all results below the respective MCLs. The Company completed initial monitoring and is now required to collect general mineral, general physical and inorganic chemical monitoring once every three years. The Company last sampled all three wells for general mineral, general physical and inorganic chemicals in May and August 2014; all results were below the respective MCL's. The next round of general mineral, general physical and inorganic chemicals monitoring is due in 2017.

Nitrate

California has changed the reporting of the maximum contaminant level (MCL) for nitrate from 45 mg/L reported as NO₃ to 10 mg/L as nitrogen (N) to be consistent with the federal MCL for nitrate. A value of 10 mg/L reported as nitrogen is essentially equivalent to 45 mg/L reported as NO₃. Beginning January 2016, all nitrate monitoring results must be reported as nitrate (as N). Compliance with the nitrate MCL will be based on an MCL for nitrate of 10 mg/L (as N).

All water systems are required to conduct annual nitrate monitoring for all active sources, provided that the nitrate concentration is less than one-half the MCL for nitrate (< 23.0 mg/L). Wells Nos. 4, 5 and 6 were last sampled for nitrate (as NO₃) in May and August 2015, with nitrate results of 16.7 mg/L, 13.7 mg/L and 37.8 mg/L, respectively. The next round of nitrate monitoring for wells Nos. 4 and 5 is due in May 2016, and must be monitored as nitrate as N. The 2015 result was not the first time that Well No. 6 has had a nitrate result over 23.0 mg/L; however, with Company has not conducted the required quarterly monitoring for one year in the past. Therefore, the Company must collect the first quarterly nitrate sample by January 31, 2016. Table 5 summarizes the last five years of nitrate monitoring from Well No. 6.

Table 5 – Last Five Years of Nitrate Data from Well No. 6

Sample Date	Sample Result as NO ₃ (mg/L)
12/21/2010	19
8/2/2011	20
12/13/2011	10.1
12/13/2012	23.7
11/14/2013	20
8/20/2014	24.1
11/20/2014	22.4
8/20/2015	37.8

The increase from November 2014 to August 2015 is the largest increase in nitrate in the last five years. The Company needs to watch the nitrate levels in this well very closely during the next year to ensure that the well does not exceed the nitrate MCL.

Nitrite

Nitrite is required to be monitored once every three years if monitoring is below the nitrite MCL of 1,000 µg/L. The last nitrite samples collected in May and August 2014, all results

were reported as non-detectable for nitrite. The next round of nitrite monitoring is due for Wells Nos. 4 and 5 in May 2017 and Well No. 6 in August 2017.

Hexavalent Chromium

Effective July 1, 2014, the Division adopted an MCL of 10 µg/L for hexavalent chromium (chromium VI) for community and nontransient-noncommunity water systems. The regulation requires all applicable public water systems to complete initial monitoring for chromium VI by December 31, 2014. Initial monitoring consists of a single sample for chromium VI collected from each active source. Chromium VI results collected between July 1, 2012, and July 1, 2014, may be grandfathered. Future monitoring for chromium VI can consist of total chromium monitoring if chromium VI results are less than 10 µg/L.

The Company completed the required chromium VI monitoring from all wells in August to complete the initial monitoring. The results were 3.4 µg/L, 3.7 µg/L and 2.0 µg/L, respectively. The Company can now begin monitoring for total chromium once every three years. The next total chromium samples are to be collected in 2017 for all wells.

Perchlorate

The Division adopted a drinking water standard for perchlorate which became effective on October 18, 2007. The perchlorate drinking water standard applies to all community and nontransient-noncommunity water systems. The perchlorate MCL is 0.006 mg/L (6 ppb). All community and nontransient-noncommunity water systems were required to satisfy the initial monitoring requirements for perchlorate by October 18, 2008. Two samples were required between October 18, 2007 and October 18, 2008. The samples must be taken five to seven months apart, with one sample being taken between May 1 and September 30, 2008. Historical data gathered after January 3, 2001 may be used to meet the initial monitoring requirements.

The Division's database showed that the last round of perchlorate monitoring was collected from Wells Nos. 4 and 5 in July 2014 and February 2015 for Well No. 6. The results were reported as non-detectable for all wells. These wells are next due for perchlorate monitoring in 2017 (Wells Nos. 4 and 5) and in 2018 (Well No. 6).

Arsenic

On January 23, 2006, the U.S. Environmental Protection Agency (USEPA) adopted a revised maximum contaminant level (MCL) for arsenic of 0.010 mg/L (milligrams per liter) or 10 µg/L (micrograms per liter). The Division also adopted a revised arsenic MCL of 0.010 mg/L on November 28, 2008.

The Division's WQI database shows the last round of arsenic monitoring was completed in May 2014 for Wells Nos. 4 and 5 and August 2015. The results were reported as non-detectable for arsenic in all three wells and are next due in 2017 for Wells Nos. 4 and 5 and in 2018 for Well No. 6.

Volatile Organic Chemicals (VOCs)

Volatile organic chemical monitoring is required once every 3 years for all active sources. A review of historical water quality analyses revealed that the Company completed the most recent VOC monitoring for Wells Nos. 4 and 5 in January 2015 and for Well No. 6 in November 2014 with results reported as non-detectable. The next VOC sampling due date for Well No. 4 and 5 is January 2018 and for Well No. 6 is November 2017.

Synthetic Organic Chemicals (SOCs)

Based on the specific monitoring schedule, the Company is required to monitor its active sources for SOCs (Alachlor, atrazine, Dibromochloropropane (DBCP), ethylene dibromide (EDB) and simazine) once every 3 years. The State's WQI showed that the Company last sampled all active wells for SOCs in 2014 with results reported as non-detect. The next sampling due date for SOCs on all active sources is 2017.

1,2,3-Trichloropropane (1,2,3-TCP)

1,2,3-TCP is currently an unregulated contaminant but the presence of 1,2,3-TCP in raw water monitoring completed by California water systems has resulted in the Division researching the development of an MCL for 1,2,3-TCP. 1,2,3-TCP was an ingredient used in pesticides in the agricultural industry. A review of the Division's WQI database did not show that the Company has completed any 1,2,3-TCP monitoring of the water produced by Wells Nos. 4, 5 and 6. The Company's sources could contain some level of 1,2,3-TCP given that the area was once surrounded by agricultural activities. In addition, some of the water systems in the same area as the Company's system have found 1,2,3-TCP in the water produced by their domestic water supply wells. The Division recommends that the Company complete 1,2,3-TCP monitoring the next time SOC monitoring is completed to determine whether or not the sources could be impacted by the development of an MCL for 1,2,3-TCP.

Radiological

The California Radionuclide Rule became effective on June 11, 2006. Initial monitoring requirements under the California Radionuclide Rule consists of four consecutive quarters of sampling. If the first two quarter sample results are less than DLR, the final two quarters of sampling may be waived. If the gross alpha (GA) activity is more than 5 pCi/L, uranium must be analyzed. Analysis results for uranium may be used to obtain the total radium activity (Gross alpha - Uranium = Total Radium). If the GA activity is more than 15 pCi/L, analysis for uranium must be performed.

The Company satisfied the initial monitoring of gross alpha and radium-228 for all wells. Based on the last samples collected each well has the following routine monitoring frequencies:

Table 5 – Most Recent Radiological Monitoring

Source	Last Sample Date	Last sample Result		Frequency		Next Due
		GA	Uranium	GA	Uranium	
Well No. 4	9/30/2008	ND	N/A	9 years	Waived	2017
Well No. 5	9/25/2007	ND	N/A	9 years	Waived	2016
Well No. 6	5/21/2015	12.8	14.0	3 years	3 years	2018

The last round of the gross alpha monitoring was collected in September 2007 and 2008 from Wells Nos. 5 and 4 respectively. These wells were assigned a sampling frequency of once every 9 years for gross alpha. The next round of gross alpha monitoring is due in August 2016. Well No. 6 was last sampled in 2015. As shown in Table 5, Well No. 6 had a gross alpha result of 12.8 pCi/L. A result this high requires analysis for uranium; the uranium result was 14 pCi/L. Although, both of these results are high but they do not exceed the gross alpha and uranium MCL. Therefore, a frequency of once every three years has been set for Well No. 6, and is next due in 2018.

Vulnerability Assessment for Sources

The source water assessment for all three active wells was completed by the CDPH Merced District with Well No. 4 completed in August 2001, Well No. 5 in April 2003 and Well No. 6 in June 2010. The Company's wells are considered most vulnerable to the following activities listed below. This information must be included each year in the Consumer Confidence Report (CCR).

Sources	Possible contaminating activities
Well 4	Automobile - Gas stations Historic gas stations Injection wells/dry wells/ sumps Known Contaminant Plumes Septic systems - high density [>1/acre] Underground Injection of Commercial/Industrial Discharges
Well 5	Animal Feeding Operations as defined in federal regulation 2 Septic systems - high density [>1/acre] Agricultural Drainage Grazing [> 5 large animals or equivalent per acre] Lagoons/liquid wastes Septic systems - low density [<1/acre] Sewer collection systems Wells - Agricultural/ Irrigation Chemical/petroleum processing/storage Historic gas stations Historic waste dumps/landfills Known Contaminant Plumes
Well 6	Contractor or government agency equipment storage yards Dredging Transportation corridors - Road Right-of-ways [herbicide use areas] Wells - Water supply

Bacteriological – Raw Water

Since the Company continuously chlorinates the water from Wells Nos. 4, 5 and 6, the wells are required to be monitored for total coliform and *E. Coli.* bacteria monthly. It should be noted that the raw water sources must be additionally monitored for triggered source monitoring as required by the California Groundwater Rule. The California Groundwater Rule stipulates that triggered source monitoring consists of collecting a total coliform and *E. Coli.* bacteria sample from all sources that were online at the time the positive sample was collected in the distribution system. A review of the historical raw water monitoring indicated that since January 2010, there has only been one positive total coliform bacteria sample and no positive *E. Coli.* bacteria samples. The total coliform positive sample was collected on November 11, 2012 from 3609 Langtry, 14.5 MPN/100mL; three repeat samples were collected on November 19th with absent results for total coliform and *E. Coli.* bacteria. See Attachment D for the raw water bacteriological monitoring summary for the last five years.

The Division strongly recommends that all bacteriological samples be analyzed with the most probable number per 100mL (MPN/100mL), commonly called the density method. The Company on occasion will analyzed samples using this method but is not consistently used. It is important to have all samples analyzed using this enumerated method because a positive sample has a numeric value of 1.1 to 23. This gives the Company an accurate density value of the total coliform and or *E. Coli.* bacteria in the sample.

Bacteriological – Distribution System

Based on the population and the number of service connections, the Company is required to collect seven routine bacteriological samples per month. According to the Bacteriological Sample Siting Plan (BSSP) dated December 29, 2009, the samples are routinely collected from seven sample locations. Two repeat sample locations are identified for each of the routine sampling locations. The Company has been conducting the bacteriological monitoring in accordance with their approved BSSP.

The sample sites consist of water taps located inside and outside of buildings. Chlorine residuals are being reported when the bacteriological samples are collected. The bacteriological samples are collected and analyzed by Alpha Analytical Laboratories. Since January 2010, the Company has had only one total coliform positive sample and no *E. Coli.* bacteria positive samples in the distribution. The total coliform positive sample was collected on January 4, 2011 from Well No. 4 (131.3 MPN/100 mL); a repeat sample was collected on January 6th with non-detectable results for total coliform and *E. Coli.* bacteria.

Per, the California Ground Water Rule (GWR), public water systems are required to conduct triggered source monitoring whenever a routine distribution system sample is positive for total coliform bacteria. The Company needs to ensure that each active well will be sampled for *E. Coli.* bacteria when a routine distribution system sample shows the presence of total coliform bacteria. See Attachment E for the distribution system bacteriological monitoring summary for the last five years.

Disinfectants and Disinfection Byproduct Rule (DBPR)

Stage 2 Disinfection Byproduct Rule (ST2DBPR)

The Company is considered a Schedule IV system under the USEPA Stage 2 Disinfectants and Disinfection Byproducts Rule. The Company received a 40/30 waiver for the Stage 2 DBPR Initial Distribution System Evaluation (IDSE) requirement. As such, the Company is required to continue monitoring as they have done under the Stage 1 DBPR. The sample location where the Stage 2 DBPR sample is collected annually is shown below:

Table 5 – Stage 2 TTHM and HAA5

PSCode	Stage 2 Monitoring site
2410008-900	ST2DBP – 2425 San Joaquin Ave.

The Company is required to collect one total trihalomethanes (TTHM) and one haloacetic acids five (HAA5) sample annually. The last round of TTHM and HAA5 monitoring was collected on June 25, 2015, with results reported as non-detectable for both TTHMs and HAA5. The next round of monitoring is due by June 30, 2016 at the above noted location.

Lead and Copper Tap Sampling

The Company is considered to be a medium-sized water system for purposes of the Lead and Copper Rule. As such, 40 sites are required for standard monitoring, and 20 sites are required for reduced monitoring. The Company has completed the two semi-annual tests, the two annual tests and seven triennial tests with the 90th percentile values computed for all rounds of monitoring below the respective action levels of 0.015 mg/L for lead and 1.3 mg/L for copper.

Table 6 - Lead and Copper Tap Monitoring Results

Sampling Interval	Sample Date	Lead (mg/L)	Copper (mg/L)
1 st 6 month	6/15/93	0.0025	0.136
2 nd 6 month	9/24/93	0.0025	0.436
Annual 1	6/14/95	0.0093	0.364
Annual 2	8/12/97	0.0062	0.0616
Triennial 1	10/23/98	0.005	0.328
Triennial 2	9/13/01	<0.001	0.110
Triennial 3	9/21/04	0.0025	0.22
Triennial 4	7/25/07	0.005	0.271
Triennial 5	10/18/10	0.0	0.36
Triennial 6	9/19/13	0.0	0.255
Triennial 7	8/20/14	<0.005	0.280
Triennial 8	Next Due by September 30, 2017		

As shown above, the next lead and copper tap monitoring for the Company's distribution system is in the summer of 2017. The lead and copper tap monitoring must be conducted

between the months of June and September. See Attachment F for the Lead and Copper monitoring summary.

Asbestos Monitoring – Distribution System

About 10% of the Company's distribution system contains asbestos-cement (AC) pipe. The potential for asbestos fibers to be released from AC pipe due to the dissolution of the cement binder is determined from the aggressive index (AI). The Department considers water with an aggressive index between 10 and 12 to be moderately aggressive and below 10 to be very aggressive. The calculated AI for the Company's active wells ranges between 11.6 and 12.0. The AI is calculated using pH, total alkalinity and total hardness from the formula:

$$AI = pH + \log ((\text{alkalinity}) (\text{hardness}))$$

The Company's system is considered moderately vulnerable to asbestos contamination due to leaching of AC pipe. Therefore, the Company is required to collect an asbestos sample at a tap served by an AC main line under conditions where asbestos contamination is most likely to occur a minimum of once every nine years. According to the Company an asbestos distribution sample was collected on Hudson; however, the Division does not have a copy of this monitoring. By January 31, 2016, the Company needs to submit a hard copy of the distribution system asbestos result to the Division and electronically to the primary station code (PS Code) 2410008-901. The Division has named this location ASB-Hudson, to reflect the distribution system location where this sample is collected.

III. SYSTEM APPRAISAL

The Company's water system is in good overall condition and is capable of supplying safe and potable water to all customers. The Company presently has three active wells with a total capacity that is more than capable of supplying the maximum day demands of the system. The Company has an agreement with Cal American Water Company to sell the water system in the future. A permit amendment application needs to be submitted prior to the change in ownership.

The Company needs to address the following issues that were noted during the inspection and a subsequent file review:

1. The 2015 result was not the first time that Well No. 6 has had a nitrate result over 23.0 mg/L; however, the Company has not conducted the required quarterly monitoring for one year in the past. Therefore, the Company must collect the first quarterly nitrate sample by **January 31, 2016**.
2. By **January 26, 2016**, the Company needs to fill out the ENP template and return it to the Division.
3. By **January 31, 2016**, the Company needs to submit a hard copy of the distribution system asbestos result to the Division and electronically to the primary station code (PS Code) 2410008-901.
4. By **March 31, 2016**, the Company needs to submit a plan and time schedule for when Well No. 2 and the abandoned well at Well Site No. 5 will be properly destroyed.

5. The Division recommends that a cross-connection control survey is conducted at least once every 5 years; therefore, the next cross-connection control survey is due in 2016.

Attachment A Inspection Photos September 2015
Attachment B Emergency Notification Template
Attachment C Water Quality Monitoring Schedule
Attachment D Source Monitoring Summary
Attachment E Distribution System
Attachment F Lead and Copper Monitoring Summary

**Meadowbrook Water Company
2015 Sanitary Survey Report
Attachment A
Photographs**

Attachment A
Meadowbrook Water Company
2015 Sanitary Survey

Well No. 4

- Drilled: 1992
- Depth: 321 feet
- Capacity: 2,000 gpm
- Pump: 150-HP



Pressure Tanks at Well No. 4

From left to right the volume of the tanks are:

- 22,500-gallons
- 22,500-gallons
- 33,000-gallons

The effective water storage volume in each tank is 50% of the total volume, due to the air bank.



Well No. 5

- Drilled: 2001
- Depth: 528 feet
- Capacity: 630 gpm
- Pump: 60-HP



**Attachment A
Meadowbrook Water Company
2015 Sanitary Survey**

Pressure Tanks at Well No. 5

From left to right the volume of the tanks are:

- 33,000-gallons
- 22,500-gallons

The effective water storage volume in each tank is 50% of the total volume, due to the air bank.



Well No. 6

- Drilled: 2007
- Depth: 376 feet
- Capacity: 1,200 gpm
- Pump: 75-HP



Pressure Tank at Well No. 6

The total volume of the storage the pressure tank is 16,500-gallons; the effective water storage volume in the tank is 8,250-gallons.



Attachment A
Meadowbrook Water Company
2015 Sanitary Survey

Chlorination

Each well site has a chlorination building with a 100-gallon sodium hypochlorite container.

Prominent metering pumps are used to inject the 12.5% sodium hypochlorite solution into the water supply.



Auxiliary Power

This diesel generator can be transported to any well site to provide backup power in the event of an outage. The generator can provide approximately 3 to 4 days of power for a well.



**Meadowbrook Water Company
2015 Sanitary Survey Report
Attachment B
Emergency Notification Plan**



Blair G. Brown, Jr.
Governor

Matthew Rodriguez
Secretary for
Environmental Protection

State Water Resources Control Board

Division of Drinking Water

1

System No. _____

WATER QUALITY EMERGENCY NOTIFICATION PLAN

Name of Utility: _____

Physical Location Address: _____

The following persons have been designated to implement the plan upon notification by the Division of Drinking Water, SWRCB that an imminent danger to the health of the water users exists:

Water Utility:		Telephone		
Contact Name & Title	Email Address	Day	Evening	Cell
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____

The implementation of the plan will be carried out with the following DDW-SWRCB and County Health personnel:

DDW-SWRCB & County Health Departments:		Telephone	
Contact Name & Title		Day	Evening
1. Kassy D. Chauhan, P.E. – Merced District Engineer DDW-SWRCB		(559) 447-3300	(559) 385-5014 (cell)
2. Ron Rowe, Env. Health Director, Merced County Environmental Health		(209) 381-1100	

3. If the above personnel cannot be reached, contact:

Office of Emergency Services Warning Center (24 hrs) (800) 852-7550 or (916) 845-8911
When reporting a water quality emergency to the Warning Center, please ask for the State Water
Resources Control Board – Division of Drinking Water Duty Officer.

NOTIFICATION PLAN

Attach a written description of the method or combination of methods to be used (radio, television, door-to-door, sound truck, etc.) to notify customers in an emergency. For each section of your plan give an estimate of the time required, necessary personnel, estimated coverage, etc. Consideration must be given to special organizations (such as schools), non-English speaking groups, and outlying water users. Ensure that the notification procedures you describe are practical and that you will be able to actually implement them in the event of an emergency. *Guidance and an example* of a notification plan are attached.

Report prepared by: _____

Signature and Title _____

Date _____

Guidance for Preparation of the Emergency Notification Plan

Good planning means having a thought out process that has sufficient detail so it can be implemented as quickly as possible. Also, contact with your local county health department, which regulates commercial food service providers (restaurants), and possibly the Food and Drug Branch of the California Department of Public Health, which regulates food processors, will need to be made. Templates (fill in the blank) for the public notices and instructions can be obtained from our Department's website at

http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/notices.shtml

We recommend that the following items be addressed in your plan:

- The names, titles, and phone numbers of the water system personnel who are responsible and authorized to implement the plan. A suggestion would be to include board members and civic organizations that may be available to assist.
- The names and phone number of newspapers, radio stations, TV stations, internet and other electronic media. Also, smaller and transient water systems may be able to use community bulletin boards and the post office.
- If a door-to-door method is used, the plan must specify who and how the notification will be carried out. It is important that the people going door-to-door are coordinated and trained so they distribute copies to the designated areas of the water system. Maps of the specific areas that the notices are to be distributed should be provided to the customers.
- Expect to receive follow-up phone calls and anticipate the questions that will be asked and have written responses for the persons answering the calls so consistent information is given. The persons answering the phones should *not* downplay the importance of the notification.
- Key facilities such as schools, hospitals, health/treatment centers, day care centers, convalescence homes, etc., should be directly notified by phone and/or hand notifications. Apartment and business owners/managers will need to be given sufficient copies and asked to distribute it to their tenants and employees. Your plan should list these facilities along with their contact information.

SAMPLE PLAN ONLY

(Use only the text that applies to your water system)

During regular working hours our people will contact the news media at television station KXYZ to broadcast the necessary warning. The local radio stations will also be contacted. The television and radio personnel are available at all hours. As a follow-up measure, we will also contact the Daily Bee, a local newspaper that serves both Outtown and Hometown.

The warnings will be issued in both English and Spanish to cover all members of the community. Outlying areas of the water service area (such as Isolated Canyon and Lonesome Mountain subdivisions) will also be notified by sound truck and/or handbill distributed to their respective areas. Both of these areas are very small and this can be done quite quickly.

A special telephone answering service can also be quickly set up at the utility headquarters (using the regular company numbers) to answer questions that will come in from consumers. Questions are anticipated, especially from the Hometown area, because that area is served by three different water companies. A map will be available to the telephone answering personnel to determine the water company serving the caller.

It is anticipated that the time for notification to the television and radio audiences will be very short. The areas served by handbill and sound truck will also be notified within an hour. For notification to be issued in other than normal hours, the same media will be contacted and an announcement will be scheduled for as long as is necessary. A sound truck(s) will be used in the early morning hours to quickly alert the people not listening to their radio or television.

**Meadowbrook Water Company
2015 Sanitary Survey Report
Attachment C
Water Quality Monitoring Schedule/
Last Sample Next Due Monitoring Schedule**

WATER QUALITY MONITORING SCHEDULE
Community System, > 3300 population, groundwater/agricultural (CLGA)
UPDATED - September 2015

Chemical - Title 22	MCL (mg/L)	EPA Method	Frequency (1)
Primary Inorganics - Section 64432			
Aluminum	1		Every 3 years
Antimony	0.006		Every 3 years
Arsenic	0.010		Every 3 years
Barium	1		Every 3 years
Beryllium	0.004		Every 3 years
Cadmium	0.005		Every 3 years
Chromium (Total Chromium)	0.05		Every 3 years (2)
Hexavalent Chromium (Chrome 6)	0.010	218.6 or 218.7	1 sample (2)(3)
Cyanide	0.15		Waived
Fluoride	2.0		Every 3 years
Mercury	0.002		Every 3 years
Nickel	0.1		Every 3 years
Perchlorate	0.006		Every 3 years (4)
Selenium	0.05		Every 3 years
Thallium	0.002		Every 3 years
Asbestos - Section 64432.2			
Asbestos - Source Water	7 MFL		Waived
Asbestos - Distribution System sampling if Asbestos-Cement pipe used	7 MFL		Every 9 years if Aggressive Index \leq 11.5
Nitrate/Nitrite - Section 64432.1			
Nitrate (as N)	10		Annually if < 5 mg/L (5)
Nitrite (as nitrogen)	1		Every 3 years if < 0.5 mg/L (6)
Nitrate + Nitrite (sum as nitrogen)	10		N/A
Secondary Standards - Table 64449-A			
Aluminum	0.2		Every 3 years
Color	15		Every 3 years
Copper	1.0		Every 3 years
Foaming Agents	0.5		Every 3 years
Iron	0.3		Every 3 years
Manganese	0.05		Every 3 years
Methyl-tert-butyl ether (MTBE)	0.005	502.2, 524.2	Every 3 years
Odor	3		Every 3 years
Silver	0.1		Every 3 years
Thiobencarb	0.001		Waived
Turbidity	5		Every 3 years
Zinc	5		Every 3 years
General Minerals - Section 64449			
Bicarbonate	N/A		Every 3 years
Carbonate	N/A		Every 3 years
Hydroxide Alkalinity	N/A		Every 3 years
Calcium	N/A		Every 3 years
Magnesium	N/A		Every 3 years
Sodium	N/A		Every 3 years
Hardness	N/A		Every 3 years
pH	N/A		Every 3 years
Secondary Standards - Table 64449-B			
TDS	500-1000;1500		Every 3 years
Specific Conductance	900-1600; 2200		Every 3 years
Chloride	250-500;600		Every 3 years
Sulfate	250-500;600		Every 3 years

MCL = Maximum Contaminant Level

Contact your district office with any questions.

- (1) Sampling shall be increased to quarterly following any result $>$ MCL.
- (2) After initial hexavalent chromium monitoring, total chromium may be used if total chromium results are < 0.010 mg/L. If total chromium result is ≥ 0.010 mg/L, monitoring for hexavalent chromium will be required.
- (3) Hexavalent chromium shall be increased to quarterly sampling following any result > 0.010 mg/L.
- (4) Perchlorate: This frequency applies if there were no detections in the initial monitoring.
- (5) Nitrate (as N) replaces Nitrate (as NO₃). Nitrate (as N) sampling shall increase to quarterly following any result ≥ 5 mg/L. Upon request, this may be reduced to an annual frequency after 4 quarters of monitoring. Beginning with Jan. 1, 2016, water systems shall comply with the Nitrate (as N) requirement.
- (6) Nitrite sampling shall be increased to quarterly following any result ≥ 0.5 mg/L. Upon request, this may be reduced to an annual frequency after 4 quarters of monitoring.

WATER QUALITY MONITORING SCHEDULE
Community System, > 3300 population, groundwater/agricultural (CLGA)
UPDATED - September 2015

Chemical - Title 22	MCL (mg/L)	EPA Method	Frequency (1)
VOCs - Table 64444-A (a)			
Benzene	0.001	502.2, 524.2	Every 3 years
Carbon Tetrachloride	0.0005	502.2, 524.2	Every 3 years
1,2-Dichlorobenzene	0.6	502.2, 524.2	Every 3 years
1,4-Dichlorobenzene	0.005	502.2, 524.2	Every 3 years
1,1-Dichloroethane	0.005	502.2, 524.2	Every 3 years
1,2-Dichloroethane	0.0005	502.2, 524.2	Every 3 years
1,1-Dichloroethylene	0.006	502.2, 524.2	Every 3 years
cis-1,2-Dichloroethylene	0.006	502.2, 524.2	Every 3 years
trans-1,2-Dichloroethylene	0.01	502.2, 524.2	Every 3 years
Dichloromethane	0.005	502.2, 524.2	Every 3 years
1,2-Dichloropropane	0.005	502.2, 524.2	Every 3 years
1,3-Dichloropropene	0.0005	502.2, 524.2	Every 3 years
Ethylbenzene	0.3	502.2, 524.2	Every 3 years
Methyl-tert-butyl ether (MTBE)	0.013	502.2, 524.2	Every 3 years
Monochlorobenzene	0.07	502.2, 524.2	Every 3 years
Styrene	0.1	502.2, 524.2	Every 3 years
1,1,2,2-Tetrachloroethane	0.001	502.2, 524.2	Every 3 years
Tetrachloroethylene (PCE)	0.005	502.2, 524.2	Every 3 years
Toluene	0.15	502.2, 524.2	Every 3 years
1,2,4-Trichlorobenzene	0.005	502.2, 524.2	Every 3 years
1,1,1-Trichloroethane	0.200	502.2, 524.2	Every 3 years
1,1,2-Trichloroethane	0.005	502.2, 524.2	Every 3 years
Trichloroethylene (TCE)	0.005	502.2, 524.2	Every 3 years
Trichlorofluoromethane	0.15	502.2, 524.2	Every 3 years
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2	502.2, 524.2	Every 3 years
Vinyl Chloride	0.0005	502.2, 524.2	Every 3 years
Xylenes (total)	1.750	502.2, 524.2	Every 3 years
SOCs - Table 64444-A (b)			
Alachlor	0.002	505, 507, 508.1, 525.2	2 consec. quarters every 3 years
Atrazine	0.001	505, 507, 508.1, 525.2	2 consec. quarters every 3 years
Bentazon	0.018		Waived
Benzo(a)pyrene	0.0002		Waived
Carbofuran	0.018		Waived
Chlordane	0.0001		Waived
2,4-D	0.07		Waived
Dalapon	0.2		Waived
Dibromochloropropane (DBCP)	0.0002	504.1, 551.1	2 consec. quarters every 3 years
Di(2-ethylhexyl)adipate	0.4		Waived
Di(2-ethylhexyl)phthalate	0.004		Waived
Dinoseb	0.007		Waived
Diquat	0.02		Waived
Endothall	0.1		Waived
Endrin	0.002		Waived
Ethylene Dibromide (EDB)	0.00005	504.1, 551.1	2 consec. quarters every 3 years
Glyphosate	0.7		Waived
Heptachlor	0.00001		Waived
Heptachlor Epoxide	0.00001		Waived
Hexachlorobenzene	0.001		Waived
Hexachlorocyclopentadiene	0.05		Waived
Lindane	0.0002		Waived
Methoxychlor	0.03		Waived
Molinate	0.02		Waived
Oxamyl	0.05		Waived
Pentachlorophenol	0.001		Waived
Picloram	0.5		Waived
Polychlorinated Biphenyls	0.0005		Waived
Simazine	0.004	505, 507, 508.1, 525.2	2 consec. quarters every 3 years
Thiobencarb	0.07		Waived
Toxaphene	0.003		Waived
2,3,7,8-TCDD (Dioxin)	0.00000003		Waived
2,4,5-TP (Silvex)	0.05		Waived

(1) This frequency applies only to chemicals for which previous results have shown no detectable results (ND).
Contact your district office for a special monitoring schedule when detectable results are found.

WATER QUALITY MONITORING SCHEDULE
Community System, > 3300 population, groundwater/agricultural (CLGA)
UPDATED - September 2015

Radiological Monitoring

Radioactivity - Section 64442	MCL	EPA Method	Frequency
Gross Alpha	15 pCi/L		Based on result of last sample (1)
Radium-226	5 pCi/L Combined		When (GA-Uranium) > 5 pCi/L (2)
Radium-228	Radium-226 + 228		Waived (1)
Uranium	20 pCi/L		When GA > 5 pCi/L (2)
Man Made Radioactivity - Section 64443			
Tritium	20000 pCi/L		Not Required
Strontium	8 pCi/L		Not Required
Gross Beta	50 pCi/L		Not Required

1. Routine Monitoring

a) Routine monitoring frequency for Gross Alpha is based on last sample collected.

Gross Alpha	Monitoring Frequency
Less than 3 pCi/L	1 sample every 9 years
≥ 3 and ≤ 7.5 pCi/L	1 sample every 6 years
> 7.5 and ≤ 15 pCi/L	1 sample every 3 years

b) Routine monitoring frequency for Radium-228 will be waived if there is no MCL exceedance.

2. Triggered Monitoring

A frequency is generally not assigned to radium-226 or uranium as the monitoring for these constituents is dependent on the gross alpha results.

- a) If the Gross Alpha particle activity is less than or equal to 5 pCi/L, analysis for Uranium is not required.
- b) If the Gross Alpha particle activity for any single sample is greater than 5 pCi/L, analysis for Uranium in that same sample is required. If any single sample for Uranium is greater than 20 pCi/L, monitor at least 4 quarters for Uranium.
- c) If the Gross Alpha particle activity is > 5 pCi/L, analysis for uranium may be used to obtain the radium-226 activity (GA - Uranium = Radium-226). If GA - Uranium > 0, contact your district office. If GA - Uranium < 0, report only the GA and Uranium results.

Contact your district office if the MCL is exceeded, or for clarification on monitoring frequencies.

DATE: 1/5/2016

STATE OF CALIFORNIA

PAGE 1

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2410008 NAME: MEADOWBROOK WC

COUNTY: MERCED

SOURCE NO: 004 NAME: WELL 04

CLASS: CLGA

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION		LAST SAMPLE	COUNT	FREQ	MODIFIED SCHEDULE	NEXT SAMPLE DUE
2410008004	2410008	MEADOWBROOK WC	004	WELL 04			
	GP	SECONDARY/GP					
		00440 BICARBONATE ALKALINITY	2014/05/15	8	36		2017/05
		00916 CALCIUM	2014/05/15	8	36		2017/05
		00445 CARBONATE ALKALINITY	2014/05/15	8	36		2017/05
		00940 CHLORIDE	2014/05/15	7	36		2017/05
		00081 COLOR	2014/05/15	7	36		2017/05
		01042 COPPER	2014/05/15	7	36		2017/05
		38260 FOAMING AGENTS (MBAS)	2014/05/15	7	36		2017/05
		00900 HARDNESS (TOTAL) AS CaCO3	2014/05/15	8	36		2017/05
		71830 HYDROXIDE ALKALINITY	2014/05/15	8	36		2017/05
		01045 IRON	2014/05/15	7	36		2017/05
		00927 MAGNESIUM	2014/05/15	8	36		2017/05
		01055 MANGANESE	2014/05/15	7	36		2017/05
		00086 ODOR THRESHOLD @ 60 C	2014/05/15	7	36		2017/05
		00403 PH, LABORATORY	2014/05/15	8	36		2017/05
		01077 SILVER	2014/05/15	7	36		2017/05
		00929 SODIUM	2014/05/15	7	36		2017/05
		00095 SPECIFIC CONDUCTANCE	2014/07/10	12	36		2017/07
		00945 SULFATE	2014/05/15	7	36		2017/05
		70300 TOTAL DISSOLVED SOLIDS	2014/05/15	7	36		2017/05
		82079 TURBIDITY, LABORATORY	2014/05/15	7	36		2017/05
		01092 ZINC	2014/05/15	7	36		2017/05
	IO	INORGANIC					
		01105 ALUMINUM	2014/05/15	7	36		2017/05
		01097 ANTIMONY	2014/05/15	7	36		2017/05
		01002 ARSENIC	2014/05/15	12	36		2017/05
		01007 BARIUM	2014/05/15	7	36		2017/05
		01012 BERYLLIUM	2014/05/15	7	36		2017/05
		01027 CADMIUM	2014/05/15	7	36		2017/05
		01034 CHROMIUM (TOTAL)	2014/05/15	20	36		2017/05
		00951 FLUORIDE (F) (NATURAL-SOURCE)	2014/05/15	8	36		2017/05

DATE: 1/5/2016

STATE OF CALIFORNIA

PAGE 2

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2410008 NAME: MEADOWBROOK WC

COUNTY: MERCED

SOURCE NO: 004 NAME: WELL 04

CLASS: CLGA

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION		LAST SAMPLE	COUNT	FREQ	MODIFIED SCHEDULE	NEXT SAMPLE DUE
2410008004	IO	INORGANIC					
		71900 MERCURY	2014/05/15	7	36		2017/05
		01067 NICKEL	2014/05/15	7	36		2017/05
		A-031 PERCHLORATE	2014/07/10	5	36		2017/07
		01147 SELENIUM	2014/05/15	7	36		2017/05
		01059 THALLIUM	2014/05/15	7	36		2017/05
	NI	NITRATE/NITRITE					
		00618 NITRATE (as N)		0	0		2015/11 DUE NOW
		71850 NITRATE (AS NO3)	2015/05/21	26	12		2016/05
		00620 NITRITE (AS N)	2014/05/15	11	36		2017/05
	RA	RADIOLOGICAL					
		01501 GROSS ALPHA	2008/09/30	22	108	M	2017/09
	S1	REGULATED VOC					
		34506 1,1,1-TRICHLOROETHANE	2015/01/27	7	36		2018/01
		34516 1,1,2,2-TETRACHLOROETHANE	2015/01/27	7	36		2018/01
		34511 1,1,2-TRICHLOROETHANE	2015/01/27	7	36		2018/01
		34496 1,1-DICHLOROETHANE	2015/01/27	7	36		2018/01
		34501 1,1-DICHLOROETHYLENE	2015/01/27	7	36		2018/01
		34551 1,2,4-TRICHLOROBENZENE	2015/01/27	7	36		2018/01
		34536 1,2-DICHLOROBENZENE	2015/01/27	7	36		2018/01
		34531 1,2-DICHLOROETHANE	2015/01/27	7	36		2018/01
		34541 1,2-DICHLOROPROPANE	2015/01/27	7	36		2018/01
		34561 1,3-DICHLOROPROPENE (TOTAL)	2015/01/27	7	36		2018/01
		34571 1,4-DICHLOROBENZENE	2015/01/27	7	36		2018/01
		34030 BENZENE	2015/01/27	7	36		2018/01
		32102 CARBON TETRACHLORIDE	2015/01/27	7	36		2018/01
		77093 CIS-1,2-DICHLOROETHYLENE	2015/01/27	7	36		2018/01
		34423 DICHLOROMETHANE	2015/01/27	7	36		2018/01
		34371 ETHYLBENZENE	2015/01/27	7	36		2018/01
		46491 METHYL-TERT-BUTYL-ETHER (MTBE)	2015/01/27	10	36		2018/01
		34301 MONOCHLOROBENZENE	2015/01/27	7	36		2018/01
		77128 STYRENE	2015/01/27	7	36		2018/01

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2410008 NAME: MEADOWBROOK WC

COUNTY: MERCED

SOURCE NO: 004 NAME: WELL 04

CLASS: CLGA

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION			LAST SAMPLE	COUNT	FREQ	MODIFIED SCHEDULE	NEXT SAMPLE DUE
2410008004	S1	34475	TETRACHLOROETHYLENE	2015/01/27	7	36		2018/01
		34010	TOLUENE	2015/01/27	7	36		2018/01
		34546	TRANS-1,2-DICHLOROETHYLENE	2015/01/27	7	36		2018/01
		39180	TRICHLOROETHYLENE	2015/01/27	7	36		2018/01
		34488	TRICHLOROFLUOROMETHANE	2015/01/27	7	36		2018/01
		81611	TRICHLOROTRIFLUOROETHANE (FREON 113)	2015/01/27	7	36		2018/01
		39175	VINYL CHLORIDE	2015/01/27	7	36		2018/01
		81551	XYLENES (TOTAL)	2015/01/27	7	36		2018/01
	S2	REGULATED SOC						
		77825	ALACHLOR	2014/05/15	7	36		2017/05
		39033	ATRAZINE	2014/05/15	7	36		2017/05
		38761	DIBROMOCHLOROPROPANE (DBCP)	2014/05/15	7	36		2017/05
		77651	ETHYLENE DIBROMIDE (EDB)	2014/05/15	7	36		2017/05
		39055	SIMAZINE	2014/05/15	7	36		2017/05

DATE: 1/5/2016

STATE OF CALIFORNIA

PAGE 4

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2410008 NAME: MEADOWBROOK WC

COUNTY: MERCED

SOURCE NO: 005 NAME: WELL 05

CLASS: CLGA

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST SAMPLE	COUNT	FREQ	MODIFIED SCHEDULE	NEXT SAMPLE DUE
2410008005	2410008 MEADOWBROOK WC	005	WELL 05			
	GP SECONDARY/GP					
	00440 BICARBONATE ALKALINITY	2014/05/15	5	36		2017/05
	00916 CALCIUM	2014/05/15	5	36		2017/05
	00445 CARBONATE ALKALINITY	2014/05/15	5	36		2017/05
	00940 CHLORIDE	2014/05/15	5	36		2017/05
	00081 COLOR	2014/05/15	5	36		2017/05
	01042 COPPER	2014/05/15	5	36		2017/05
	38260 FOAMING AGENTS (MBAS)	2014/05/15	5	36		2017/05
	00900 HARDNESS (TOTAL) AS CaCO3	2014/05/15	5	36		2017/05
	71830 HYDROXIDE ALKALINITY	2014/05/15	5	36		2017/05
	01045 IRON	2014/05/15	5	36		2017/05
	00927 MAGNESIUM	2014/05/15	5	36		2017/05
	01055 MANGANESE	2014/05/15	5	36		2017/05
	00086 ODOR THRESHOLD @ 60 C	2014/05/15	5	36		2017/05
	00403 PH, LABORATORY	2014/05/15	5	36		2017/05
	01077 SILVER	2014/05/15	5	36		2017/05
	00929 SODIUM	2014/05/15	5	36		2017/05
	00095 SPECIFIC CONDUCTANCE	2014/07/10	9	36		2017/07
	00945 SULFATE	2014/05/15	5	36		2017/05
	70300 TOTAL DISSOLVED SOLIDS	2014/05/15	5	36		2017/05
	82079 TURBIDITY, LABORATORY	2014/05/15	5	36		2017/05
	01092 ZINC	2014/05/15	5	36		2017/05
	IO INORGANIC					
	01105 ALUMINUM	2014/05/15	5	36		2017/05
	01097 ANTIMONY	2014/05/15	5	36		2017/05
	01002 ARSENIC	2014/05/15	5	36		2017/05
	01007 BARIUM	2014/05/15	5	36		2017/05
	01012 BERYLLIUM	2014/05/15	5	36		2017/05
	01027 CADMIUM	2014/05/15	5	36		2017/05
	01034 CHROMIUM (TOTAL)	2014/05/15	5	36		2017/05
	00951 FLUORIDE (F) (NATURAL-SOURCE)	2014/05/15	5	36		2017/05

DATE: 1/5/2016

STATE OF CALIFORNIA

PAGE 5

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2410008 NAME: MEADOWBROOK WC

COUNTY: MERCED

SOURCE NO: 005 NAME: WELL 05

CLASS: CLGA

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION		LAST SAMPLE	COUNT	FREQ	MODIFIED SCHEDULE	NEXT SAMPLE DU
2410008005	IO	INORGANIC					
		71900 MERCURY	2014/05/15	5	36		2017/05
		01067 NICKEL	2014/05/15	5	36		2017/05
		A-031 PERCHLORATE	2014/07/10	4	36		2017/07
		01147 SELENIUM	2014/05/15	5	36		2017/05
		01059 THALLIUM	2014/05/15	5	36		2017/05
	NI	NITRATE/NITRITE					
		00618 NITRATE (as N)		0	0		2015/11 DUE NOW
		71850 NITRATE (AS NO3)	2015/05/21	17	12		2016/05
		00620 NITRITE (AS N)	2014/05/15	5	36		2017/05
	RA	RADIOLOGICAL					
		01501 GROSS ALPHA	2007/09/25	10	108	M	2016/09
	S1	REGULATED VOC					
		34506 1,1,1-TRICHLOROETHANE	2015/01/27	5	36		2018/01
		34516 1,1,2,2-TETRACHLOROETHANE	2015/01/27	5	36		2018/01
		34511 1,1,2-TRICHLOROETHANE	2015/01/27	5	36		2018/01
		34496 1,1-DICHLOROETHANE	2015/01/27	5	36		2018/01
		34501 1,1-DICHLOROETHYLENE	2015/01/27	5	36		2018/01
		34551 1,2,4-TRICHLOROBENZENE	2015/01/27	5	36		2018/01
		34536 1,2-DICHLOROBENZENE	2015/01/27	5	36		2018/01
		34531 1,2-DICHLOROETHANE	2015/01/27	5	36		2018/01
		34541 1,2-DICHLOROPROPANE	2015/01/27	5	36		2018/01
		34561 1,3-DICHLOROPROPENE (TOTAL)	2015/01/27	5	36		2018/01
		34571 1,4-DICHLOROBENZENE	2015/01/27	5	36		2018/01
		34030 BENZENE	2015/01/27	5	36		2018/01
		32102 CARBON TETRACHLORIDE	2015/01/27	5	36		2018/01
		77093 CIS-1,2-DICHLOROETHYLENE	2015/01/27	5	36		2018/01
		34423 DICHLOROMETHANE	2015/01/27	5	36		2018/01
		34371 ETHYLBENZENE	2015/01/27	5	36		2018/01
		46491 METHYL-TERT-BUTYL-ETHER (MTBE)	2015/01/27	5	36		2018/01
		34301 MONOCHLOROBENZENE	2015/01/27	5	36		2018/01
		77128 STYRENE	2015/01/27	5	36		2018/01

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2410008 NAME: MEADOWBROOK WC

COUNTY: MERCED

SOURCE NO: 005 NAME: WELL 05

CLASS: CLGA

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION		LAST SAMPLE	COUNT	FREQ	MODIFIED SCHEDULE	NEXT SAMPLE DUE
2410008005	S1	34475 TETRACHLOROETHYLENE	2015/01/27	5	36		2018/01
		34010 TOLUENE	2015/01/27	5	36		2018/01
		34546 TRANS-1,2-DICHLOROETHYLENE	2015/01/27	5	36		2018/01
		39180 TRICHLOROETHYLENE	2015/01/27	5	36		2018/01
		34488 TRICHLOROFLUOROMETHANE	2015/01/27	5	36		2018/01
		81611 TRICHLOROTRIFLUOROETHANE (FREON 113)	2015/01/27	5	36		2018/01
		39175 VINYL CHLORIDE	2015/01/27	5	36		2018/01
		81551 XYLENES (TOTAL)	2015/01/27	5	36		2018/01
	S2	REGULATED SOC					
		77825 ALACHLOR	2014/05/15	5	36		2017/05
		39033 ATRAZINE	2014/05/15	5	36		2017/05
		38761 DIBROMOCHLOROPROPANE (DBCP)	2014/05/15	5	36		2017/05
		77651 ETHYLENE DIBROMIDE (EDB)	2014/05/15	5	36		2017/05
		39055 SIMAZINE	2014/05/15	5	36		2017/05

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2410008 NAME: MEADOWBROOK WC

COUNTY: MERCED

SOURCE NO: 010 NAME: WELL 06

CLASS: CLGA

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION		LAST SAMPLE	COUNT	FREQ	MODIFIED SCHEDULE	NEXT SAMPLE DUE
2410008010	2410008	MEADOWBROOK WC	010	WELL 06			
	GP	SECONDARY/GP					
		00440 BICARBONATE ALKALINITY	2014/08/20	3	36		2017/08
		00916 CALCIUM	2014/08/20	3	36		2017/08
		00445 CARBONATE ALKALINITY	2014/08/20	3	36		2017/08
		00940 CHLORIDE	2014/08/20	3	36		2017/08
		00081 COLOR	2014/08/20	3	36		2017/08
		01042 COPPER	2014/08/20	3	36		2017/08
		38260 FOAMING AGENTS (MBAS)	2014/08/20	3	36		2017/08
		00900 HARDNESS (TOTAL) AS CaCO3	2014/08/20	3	36		2017/08
		71830 HYDROXIDE ALKALINITY	2014/08/20	3	36		2017/08
		01045 IRON	2014/08/20	3	36		2017/08
		00927 MAGNESIUM	2014/08/20	3	36		2017/08
		01055 MANGANESE	2014/08/20	3	36		2017/08
		00086 ODOR THRESHOLD @ 60 C	2014/08/20	3	36		2017/08
		00403 PH, LABORATORY	2014/08/20	3	36		2017/08
		01077 SILVER	2014/08/20	3	36		2017/08
		00929 SODIUM	2014/08/20	3	36		2017/08
		00095 SPECIFIC CONDUCTANCE	2015/02/19	7	36		2018/02
		00945 SULFATE	2014/08/20	3	36		2017/08
		70300 TOTAL DISSOLVED SOLIDS	2014/08/20	3	36		2017/08
		82079 TURBIDITY, LABORATORY	2014/08/20	3	36		2017/08
		01092 ZINC	2014/08/20	3	36		2017/08
	IO	INORGANIC					
		01105 ALUMINUM	2014/08/20	3	36		2017/08
		01097 ANTIMONY	2014/08/20	3	36		2017/08
		01002 ARSENIC	2014/08/20	3	36		2017/08
		01007 BARIUM	2014/08/20	3	36		2017/08
		01012 BERYLLIUM	2014/08/20	3	36		2017/08
		01027 CADMIUM	2014/08/20	3	36		2017/08
		01034 CHROMIUM (TOTAL)	2014/08/20	3	36		2017/08
		00951 FLUORIDE (F) (NATURAL-SOURCE)	2014/08/20	3	36		2017/08

DATE: 1/5/2016

STATE OF CALIFORNIA

PAGE 8

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2410008 NAME: MEADOWBROOK WC

COUNTY: MERCED

SOURCE NO: 010 NAME: WELL 06

CLASS: CLGA

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION	LAST SAMPLE	COUNT	FREQ	MODIFIED SCHEDULE	NEXT SAMPLE DUE
2410008010	IO INORGANIC					
	71900 MERCURY	2014/08/20	3	36		2017/08
	01067 NICKEL	2014/08/20	3	36		2017/08
	A-031 PERCHLORATE	2015/02/19	4	36		2018/02
	01147 SELENIUM	2014/08/20	3	36		2017/08
	01059 THALLIUM	2014/08/20	3	36		2017/08
	NI NITRATE/NITRITE					
	00618 NITRATE (as N)		0	0		2015/11 DUE NOW
	71850 NITRATE (AS NO3)	2015/08/20	10	12		2016/08
	00620 NITRITE (AS N)	2014/08/20	3	36		2017/08
	RA RADIOLOGICAL					
	01501 GROSS ALPHA	2015/05/21	7	36	M	2018/05
	28012 URANIUM (PCI/L)	2015/05/21	7	36	M	2018/05
	SI REGULATED VOC					
	34506 1,1,1-TRICHLOROETHANE	2014/11/20	4	36		2017/11
	34516 1,1,2,2-TETRACHLOROETHANE	2014/11/20	4	36		2017/11
	34511 1,1,2-TRICHLOROETHANE	2014/11/20	4	36		2017/11
	34496 1,1-DICHLOROETHANE	2014/11/20	4	36		2017/11
	34501 1,1-DICHLOROETHYLENE	2014/11/20	4	36		2017/11
	34551 1,2,4-TRICHLOROBENZENE	2014/11/20	4	36		2017/11
	34536 1,2-DICHLOROBENZENE	2014/11/20	4	36		2017/11
	34531 1,2-DICHLOROETHANE	2014/11/20	4	36		2017/11
	34541 1,2-DICHLOROPROPANE	2014/11/20	4	36		2017/11
	34561 1,3-DICHLOROPROPENE (TOTAL)	2014/11/20	4	36		2017/11
	34571 1,4-DICHLOROBENZENE	2014/11/20	4	36		2017/11
	34030 BENZENE	2014/11/20	4	36		2017/11
	32102 CARBON TETRACHLORIDE	2014/11/20	4	36		2017/11
	77093 CIS-1,2-DICHLOROETHYLENE	2014/11/20	4	36		2017/11
	34423 DICHLOROMETHANE	2014/11/20	4	36		2017/11
	34371 ETHYLBENZENE	2014/11/20	4	36		2017/11
	46491 METHYL-TERT-BUTYL-ETHER (MTBE)	2014/11/20	7	36		2017/11
	34301 MONOCHLOROBENZENE	2014/11/20	4	36		2017/11

DATE: 1/5/2016

STATE OF CALIFORNIA

PAGE 9

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2410008 NAME: MEADOWBROOK WC

COUNTY: MERCED

SOURCE NO: 010 NAME: WELL 06

CLASS: CLGA

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION		LAST SAMPLE	COUNT	FREQ	MODIFIED SCHEDULE	NEXT SAMPLE DUE
2410008010	S1	77128	STYRENE	2014/11/20	4	36	2017/11
		34475	TETRACHLOROETHYLENE	2014/11/20	4	36	2017/11
		34010	TOLUENE	2014/11/20	4	36	2017/11
		34546	TRANS-1,2-DICHLOROETHYLENE	2014/11/20	4	36	2017/11
		39180	TRICHLOROETHYLENE	2014/11/20	4	36	2017/11
		34488	TRICHLOROFLUOROMETHANE	2014/11/20	4	36	2017/11
		81611	TRICHLOROTRIFLUOROETHANE (FREON 113)	2014/11/20	4	36	2017/11
		39175	VINYL CHLORIDE	2014/11/20	4	36	2017/11
		81551	XYLENES (TOTAL)	2014/11/20	4	36	2017/11
	S2	REGULATED SOC					
		77825	ALACHLOR	2014/11/20	4	36	2017/11
		39033	ATRAZINE	2014/11/20	4	36	2017/11
		38761	DIBROMOCHLOROPROPANE (DBCP)	2014/11/20	4	36	2017/11
		77651	ETHYLENE DIBROMIDE (EDB)	2014/11/20	4	36	2017/11
		39055	SIMAZINE	2014/11/20	4	36	2017/11

LAST SAMPLE DATE AND MONITORING SCHEDULE

SYSTEM NO: 2410008 NAME: MEADOWBROOK WC

COUNTY: MERCED

SOURCE NO: 900 NAME: ST2DBP - 2425 SAN JOAQUIN AVE

CLASS: DBPA

STATUS: Active

PSCODE	GROUP/CONSTITUENT IDENTIFICATION		LAST SAMPLE	COUNT	FREQ	MODIFIED SCHEDULE	NEXT SAMPLE QUE
2410008900	2410008	MEADOWBROOK WC	900	ST2DBP - 2425 SAN JOAQUIN AVE			
		(UNIDENTIFIED GROUP)					
	82721	DIBROMOACETIC ACID (DBAA)	2015/06/25	2	12		2016/06
	77288	DICHLOROACETIC ACID (DCAA)	2015/06/25	2	12		2016/06
	A-049	HALOACETIC ACIDS (5) (HAA5)	2015/06/25	2	12		2016/06
	A-041	MONOBROMOACETIC ACID (MBAA)	2015/06/25	2	12		2016/06
	A-042	MONOCHLOROACETIC ACID (MCAA)	2015/06/25	2	12		2016/06
	82723	TRICHLOROACETIC ACID (TCAA)	2015/06/25	2	12		2016/06
	TH	TRIHALOMETHANES					
	82080	TOTAL TRIHALOMETHANES	2015/06/25	2	12		2016/06
	UA	STATE UCMR					
	32101	BROMODICHLOROMETHANE (THM)	2015/06/25	2	12		2016/06
	32104	BROMOFORM (THM)	2015/06/25	2	12		2016/06
	32106	CHLOROFORM (THM)	2015/06/25	2	12		2016/06
	32105	DIBROMOCHLOROMETHANE (THM)	2015/06/25	2	12		2016/06

**Meadowbrook Water Company
2015 Sanitary Survey Report
Attachment D
Raw Water Bacteriological Monitoring Summary**

Meadowbrook WC

2410008

Source Monitoring Freq: 1/M

Sample Date	Time	Source	T Coli	E Coli	F Coli	HPC	Turbidity	Violation	Comment
1/5/2010		Wells: 5,4	<1.0	<1.0		<1,<1			
1/5/2010	#####	Well 6	1.0	<1.0		<1			
1/6/2010	#####	Well 6 repeat	<1.0	<1.0					
2/2/2010		Wells: 6,5,4	<1.0	<1.0		49,2,5			
3/9/2010		Wells: 6,4	<1.0	<1.0		96,104			well 5 offline
4/6/2010		Wells: 6,5,4	<1.0	<1.0		10,25, 73			
5/4/2010		Wells: 6,5,4	<1.0	<1.0		310,10 5,37			
6/1/2010		Wells: 6,5,4	<1.0	<1.0		194,75 16			
7/6/2010		Wells: 6,5,4	<1.0	<1.0		<1.0,3 7,7			
8/3/2010		Wells: 6,5,4	<1.0	<1.0		2,15,1 7			
9/7/2010		Wells: 6,4,5	<1.0	<1.0		3,1,16			
10/5/2010		Wells: 4,6	<1.0	<1.0					
11/2/2010		Wells: 4,5	<1.0	<1.0					
12/7/2010		Wells: 6,5,4	<1.0	<1.0		7,5,69			
1/4/2011		Wells: 6,5	<1.0	<1.0					
1/4/2011	#####	Well 4	131.3	<1.0		3,6			
1/6/2011	8:30	Well 4	<1.0	<1.0		2			
2/1/2011		Wells: 6,5,4	<1.0	<1.0		<1,6,7			
3/1/2011		Wells: 4,5	<1.0	<1.0		9,7			
3/15/2011	#####	Well 6	<1.0	<1.0		<1.0			
4/5/2011		Wells: 6,5,4	<1.0	<1.0		<1,75, 10			
5/3/2011		Wells: 6,5,4	<1.0	<1.0		<1,4,4			
6/7/2011		Wells: 4, 5, 6	<1.0	<1.0		1-29			
7/5/2011		Wells: 4,5,6	<1.0	<1.0		9,<1,2			
8/2/2011		Wells: 4,5,6	<1.0	<1.0		5,4,4			
9/20/2011		Wells: 4,5,6,	<1.0	<1.0					
10/11/2011		Wells: 4,5	<1.0	<1.0					
11/8/2011		Wells: 6,5,4	<1.0	<1.0					
11/29/2011		Wells: 5,4,6				5,4,<1			HPC only
12/13/2011		Wells: 4,5,6	<1.0	<1.0		28,5,< 1			

Sample Date	Time	Source	T Coli	E Coli	F Coli	HPC	Turbidity	Violation	Comment
1/10/2012		Wells: 4,5,6	A	A		3,488, <1			
2/14/2012		Wells: 5,6	<1.0	<1.0		115,<1			
3/13/2012		Wells: 4,6	<1.0	<1.0		<1,<1			
3/19/2012	####	Well 5	<1.0	<1.0		23			
4/10/2012		Wells: 6,5,4	A	A		211,16 ,<1			
5/8/2012		Wells: 4,5,6	<1.0	<1.0		<1,10, 2			
6/12/2012		Wells: 5,4	<1	<1		3,<1			
7/10/2012		Wells: 4,5,6	A	A		<1,6			
8/13/2012	####	Well 6	A	A					
8/14/2012		Wells: 6,5,4	<1.0	<1.0					
9/11/2012		Wells: 4,5,6	<1.0	<1.0		<1.0,1 05,26			
10/9/2012		Wells: 4,5,6	A	A		5,88,< 1			
11/13/2012		Wells: 4,5,6	<1	<1					
12/13/2012		Wells: 6,4,5	<1.0	<1.0		<1,<1, 5			
1/10/2013		Wells: 5,6	<1.0	<1.0					
1/29/2013		Well 4	<1.0	<1.0					
2/14/2013		Wells: 6,4,5	<1.0	<1.0					
3/14/2013		Wells: 6,4,5	<1.0	<1.0		<1,<1, <1			
4/11/2013		Wells: 6,4,5	A	A		<1,<1, 4			
5/9/2013		Wells: 6,4,5	<1.0	<1.0		<1,<1, <1			
6/27/2013		Wells: 6, 4, 5	<1.0	<1.0					
7/11/2013		Wells: 6,4,5	<1.0	<1.0					
8/15/2013		Wells: 6,4,5	<1.0	<1.0		<1,191 ,<1			
9/12/2013		Wells: 6,4,5	<1.0	<1.0		<1,<1 <1			
10/10/2013		Wells: 6,4,5	<1.0	<1.0		1,<1,< 1			
11/14/2013		Wells: 4, 5, 6	<1.0	<1.0					
12/12/2013		Wells: 6, 5	<1.0	<1.0					
1/9/2014		Wells: 6, 5	<1.0	<1.0					
2/13/2014		Wells: 6, 4, 5	<1.0	<1.0					
3/13/2014		Wells: 6, 4, 5	<1.0	<1.0		1-17			
4/10/2014	####	Wells: 4,5,6	A	A		<1			

<i>Sample Date</i>	<i>Time</i>	<i>Source</i>	<i>T Coli</i>	<i>E Coli</i>	<i>F Coli</i>	<i>HPC</i>	<i>Turbidity</i>	<i>Violation</i>	<i>Comment</i>
5/15/2014		Wells: 4,5,6	<1.0	<1.0		1-9			
6/12/2014		Wells: 6, 4, 5	A	A					
7/10/2014		Wells: 6, 4, 5	<1.0	<1.0					
8/20/2014		Wells: 4, 5, 6	<1.0	<1.0		1-10			
9/11/2014		Wells: 6, 4, 5	<1.0	<1.0		<1			
10/16/2014		Wells: 6, 5, 4	<1.0	<1.0					
11/20/2014		Wells: 6, 4, 5	<1.0	<1.0		<1-2			
12/18/2014		Wells: 4, 5, 6	<1	<1		<1- 230			
1/22/2015		Wells: 6,4,5	<1.0	<1.0					
2/19/2015		Wells: 6, 4, 5	<1.0	<1.0		8.0- 248.0			
3/19/2015		Wells 6, 4, 5	<1.0	<1.0					
4/20/2015		Wells: 4, 5	<1.0	<1.0		7-11			
5/21/2015		Wells: 4, 5, 6	<1.0	<1.0					
6/25/2015		Wells: 4, 5, 6	<1.0	<1.0					
7/16/2015		Wells: 4, 5	<1.0	<1.0		<1			
8/20/2015		Wells: 5, 6	<1.0	<1.0					
9/1/2015		Wells: 4, 5, 6	<1.0	<1.0		<1-18			
10/8/2015		Wells: 4, 5, 6	<1.0	<1.0		<1-5			
11/12/2015		Wells: 4, 5, 6	<1.0	<1.0		<1.0- 37			

**Meadowbrook Water Company
2015 Sanitary Survey Report
Attachment E
Distribution System Bacteriological Monitoring Summary**

Bacteriological Distribution Monitoring Report

2410008 Meadowbrook WC

Distribution System Freq: S/M

<i>Sample Date</i>	<i>Location</i>	<i>T Coli</i>	<i>E Coli</i>	<i>F Coli</i>	<i>HPC</i>	<i>Type</i>	<i>Cl2</i>	<i>Violation</i>	<i>Comment</i>
1/1/2010	6 samples	<1.0	<1.0			Routine	0.15-0.27		
2/1/2010	6 samples	<1.0	<1.0			Routine	<0.05-0.33		
3/1/2010	5 samples	<1.0	<1.0			Routine	0.06-0.17		
3/9/2010	Richwood Meats	<1.0	<1.0			Other	0.14		<i>end of line testing</i>
3/9/2010	Mosquito Abatement	<1.0	<1.0			Other	0.06		<i>end of line testing</i>
3/9/2010	3156 B.S. Court	<1.0	<1.0			Other	0.07		<i>end of line testing</i>
3/9/2010	2600 B & B	<1.0	<1.0			Other	0.05		
4/1/2010	6 samples	<1.0	<1.0			Routine	0.11-0.26		
5/1/2010	7 samples	<1.0	<1.0			Routine	0.23-0.61		
6/1/2010	6 samples	<1.0	<1.0			Routine	0.14-0.28		
7/1/2010	6 samples	<1.0	<1.0			Routine	0.20-0.30		
8/1/2010	6 samples	<1.0	<1.0			Routine	<0.05-0.29		
9/1/2010	5 samples	<1.0	<1.0			Routine	0.14-0.21		
9/28/2010	4 samples	A	A			Other	0.12-0.28		<i>end of line testing</i>
10/1/2010	6 samples	A	A			Routine	0.08-0.15		
11/1/2010	6 samples	<1.0	<1.0			Routine	0.10-0.20		
12/1/2010	6 samples	<1.0	<1.0			Routine	0.11-0.26		
1/1/2011	6 samples	<1.0	<1.0			Routine	<0.05-0.12		
2/1/2011	6 samples	<1.0	<1.0			Routine	0.15-0.59		
3/1/2011	6 samples	<1.0	<1.0			Routine	0.17-0.21		
3/22/2011	4 samples	<1.0	<1.0			Other	0.06-0.21		<i>end of line testing</i>
4/5/2011	6 samples	<1.0	<1.0			Routine	0.10-0.23		
5/3/2011	6 samples	<1.0	<1.0			Routine	0.17-0.23		
6/7/2011	6 samples	<1.0	<1.0			Routine	0.17-0.32		
7/5/2011	6 samples	<1.0	<1.0			Routine	0.15-0.28		
8/2/2011	6 samples	<1.0	<1.0			Routine	0.17-0.22		
9/20/2011	5 samples	<1.0	<1.0			Routine	0.15-0.3		

<i>Sample Date</i>	<i>Location</i>	<i>T Coli</i>	<i>E Coli</i>	<i>F Coli</i>	<i>HPC</i>	<i>Type</i>	<i>Cl2</i>	<i>Violation</i>	<i>Comment</i>
9/20/2011	5 samples	<1.0	<1.0			Other	0.2-0.47		end of line testing
10/1/2011	6 samples	<1.0	<1.0			Routine	0.06-0.14		
11/8/2011	6 samples	<1.0	<1.0			Routine	0.14-0.25		
12/13/2011	6 samples	<1.0	<1.0			Routine	0.18-0.31		
1/10/2012	6 samples	A	A			Routine	0.08-0.36		
2/14/2012	6 samples	<1.0	<1.0			Routine	0.18-0.35		
3/13/2012	4 samples	<1.0	<1.0			Other			end of line testing/flushing
3/19/2012	6 samples	<1.0	<1.0			Routine	0.13-0.23		
4/10/2012	6 samples	<1.0	<1.0			Routine	0.14-0.36		
5/8/2012	6 samples	<1.0	<1.0			Routine	0.09-0.26		
6/12/2012	6 samples	<1.0	<1.0			Routine	0.16-0.24		
7/10/2012	6 samples	<1.0	<1.0			Routine	0.18-0.28		
8/14/2012	6 samples	<1.0	<1.0			Routine	0.14-0.20		
9/11/2012	6 samples	<1.0	<1.0			Routine	0.15-0.33		
10/9/2012	6 samples	<1.0	<1.0			Routine	0.04-0.25		
11/13/2012	3609 Langtry	14.5	<1.0			Routine			all wells sampled at this time, GWR samples not req'd
11/13/2012	5 samples	<1.0	<1.0			Routine	0.24-0.34		
11/19/2012	3609 Langtry	A	A			Repeat	0.19		
11/19/2012	3619 Langtry	A	A			Repeat	0.18		
11/19/2012	3571 Langtry	A	A			Repeat	0.23		
12/13/2012	6 samples	<1.0	<1.0			Routine	0.2		
1/10/2013	6 samples	<1.0	<1.0			Routine	0.25-0.40		
2/14/2013	6 samples	<1.0	<1.0			Routine	0.20-0.25		
3/14/2013	6 samples	<1.0	<1.0			Routine	0.19-0.35		
4/11/2013	6 samples	<1.0	<1.0			Routine	0.15-0.28		
5/9/2013	6 samples	<1.0	<1.0			Routine	0.19-0.22		
6/27/2013	6 samples	<1.0	<1.0			Routine	0.16-0.22		
7/11/2013	6 samples	<1.0	<1.0			Routine	0.17-0.18		
8/15/2013	6 samples	<1.0	<1.0			Routine	0.15-0.28		

<i>Sample Date</i>	<i>Location</i>	<i>T Coli</i>	<i>E Coli</i>	<i>F Coli</i>	<i>HPC</i>	<i>Type</i>	<i>CI2</i>	<i>Violation</i>	<i>Comment</i>
9/12/2013	6 samples	<1.0	<1.0			Routine	0.18-0.30		
10/10/2013	6 samples	<1.0	<1.0			Routine	0.15-0.25		
11/14/2013	6 samples	<1.0	<1.0			Routine	0.21-0.27	MR7	
12/12/2013	6 samples	<1.0	<1.0			Routine	0.17-0.3		
1/9/2014	6 samples	<1.0	<1.0			Routine	0.10-0.25		
2/13/2014	6 Samples	<1.0	<1.0			Routine	0.23-0.28		
3/13/2014	6 samples	<1.0	<1.0			Routine	0.19-0.22		
4/10/2014	6 Samples	A	A			Routine	0.22-0.26		
5/15/2014	6 Samples	<1.0	<1.0			Routine	0.16-0.21		
6/12/2014	6 samples	<1.0	<1.0			Routine	0.17-0.22		
7/10/2014	6 samples	<1.0	<1.0			Routine	0.19-0.26		
8/20/2014	6 Samples	<1.0	<1.0			Routine	0.16-0.23		
9/11/2014	6 Samples	<1.0	<1.0			Routine	0.12-0.19		
10/16/2014	7 samples	<1.0	<1.0			Routine	0.07-0.14		
11/20/2014	6 samples	<1.0	<1.0			Routine	0.13-0.19		
12/18/2014	6 samples	<1.0	<1.0			Routine	0.14-0.25		
1/22/2015	6 samples	<1.0	<1.0			Routine	0.11-0.30		
2/19/2015	7 samples	<1.0	<1.0			Routine	0.19-0.26		
3/19/2015	7 samples	<1.0	<1.0			Routine	0.16-0.22		
4/20/2015	6 Samples	<1.0	<1.0			Routine	0.19-0.36		
5/1/2015	6 samples	<1.0	<1.0			Routine	0.13-0.23		
6/26/2015	6 Samples	<1.0	<1.0			Routine	0.16-0.26		
7/16/2015	6 Samples	<1.0	<1.0			Routine	0.15-0.29		
8/20/2015	6 Samples	<1.0	<1.0			Routine	0.24-0.30		
9/24/2015	6 Samples	<1.0	<1.0			Routine	<0.05		
10/8/2015	6 Samples	<1.0	<1.0			Routine	0.11-0.30		
11/12/2015	6 Samples	<1.0	<1.0			Routine	0.20-2.50		

<i>Sample Date</i>	<i>Location</i>	<i>T Coli</i>	<i>E Coli</i>	<i>F Coli</i>	<i>HPC</i>	<i>Type</i>	<i>Cl2</i>	<i>Violation</i>	<i>Comment</i>
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Violation Key

MCL	Exceeds the maximum contaminant level	MR4	Did not collect 5 routine samples for previous month's positive sample
MR1	No monthly sample for the report month	MR5	Incorrect number of repeat samples as follow-up to a positive sample
MR2	No quarterly sample for the report month	MR6	No source sample
MR3	Incorrect number of routine samples for the report month	MR7	No summary report submitted
		MR8	Other comments and/or info.

**Meadowbrook Water Company
2015 Sanitary Survey Report
Attachment F
Lead and Copper Monitoring Summary**

Individual System Lead and Copper Rule Tracking Report

2410008 MEADOWBROOK WC Pop: 4400 Eng: MRW Lead Action Level: 0.015 mg/L
Copper Action Level: 1.3 mg/L

Sample Date Begin/(End)	Monitoring Period	Sample Set ID	Number Required	Number Sampled	Lead 90th % (mg/L)	Copper 90th % (mg/L)	Action Taken	Action Type	Next Due Date	Next Due Freq	Comments
(6/15/1993)	6M1ST-1993	1st 6	20	20	0.0025	0.136			12/15/1993	2nd 6	
(9/24/1993)	6M2ND-1993	2nd 6	20	21	0.0025	0.436			9/30/1994	A1	
(6/14/1995)	YR1995	A1	10	12	0.0093	0.364			9/30/1996	A2	
(8/12/1997)	YR1997	A2	10	10	0.0062	0.0616			9/30/2000	T1	
(10/23/1998)	3Y1996-1998	T1	10	10	0.005	0.328			9/30/2001	T2	
(9/13/2001)	3Y1999-2001	T2	10	10	<0.001	0.110			9/30/2004	T3	akh on 3/12/03; pop >3300 so 20 sites reqd. akh 8/26/04
(9/21/2004)	3Y2002-2004	T3	20	20	0.0025	0.22			9/30/2007	T4	akh 10/15/04
(7/25/2007)	3Y2005-2007	T4	20	22	0.005	0.271			9/30/2010	T5	akh 11/6/07
10/18/2010 (12/14/2010)	3Y2008-2010	T5	20	21	0.0	0.36			9/30/2013	T6	samples collected out of range due to customer noncompliance. Entered by MRW 1-7-2011.
6/25/2013 (9/19/2013)	3Y2011-2013	T6	20	20	0.0	0.255			9/30/2016	T7	entered by MRW 10-16-13.
(8/20/2014)	3Y2012-2014	T6	20	19	<0.005	0.280			9/30/2016	T7	System collecting yearly.

Legend:

Cit: Citation

1st 6: 1st initial 6-mo. round of monitoring

A1: 1st Annual monitoring

T1: 1st Triennial (3 yr) monitoring

EL: Enforcement letter

2nd 6: 2nd initial 6-mo. round of monitoring

A2: 2nd Annual monitoring

T2: 2nd Triennial (3 yr) monitoring

T3: 3rd Triennial (3 yr) monitoring

1/5/2016



State Water Resources Control Board
Division of Drinking Water

TO: Kassy Chauhan, P.E.
Senior Sanitary Engineer
MERCED DISTRICT
Drinking Water Field Operations Branch

FROM: Bruce Ramsden, P.E.
Associate Sanitary Engineer
MERCED DISTRICT

DATE: September 29, 2017

SUBJECT: SANITARY SURVEY
Hillview Water Company - Oakhurst-Sierra Lakes Water System
SYSTEM NO. 2010007
MADERA COUNTY

I. INTRODUCTION

On December 7, 2016, I conducted a sanitary survey of the Hillview Water Company's Oakhurst-Sierra Lakes water system (OSL) and reviewed its operations. Hillview Water Company (Hillview) maintains and operates the potable water system which serves this small community in the foothills of rural Madera County. Table 1 summarizes the active sources along with the capacity of each source. During the inspection, I met with Jim Foster, General Manager and Ralph Fairfield, Compliance and Resource Officer, for the water system. The water system was previously inspected by Maria Wiczorek, Environmental Scientist, of the Division on April 11, 2013, and an inspection report was prepared dated May 6, 2013.

1.1 DESCRIPTION OF SYSTEM

OSL currently serves an estimated population of 3,818 through 1,032 metered service connections. The 2016 electronic annual report to the Drinking Water Program (or eAR) also identifies 158 unmetered connections for fire suppression, street cleaning, line flushing, construction or temporary meters. OSL has 16 active wells, three pending (Forest Ridge 5, 6 & 7) wells, one standby well, six inactive wells (see Table 1), 13 storage tanks and the associated distribution system. OSL is in operation year round and is designated as a community water system. The distribution system consists of 15 pressure zones. Depending on the specific area of the water system, sewage disposal is provided by individual septic systems with leach fields or a common sewer collection and treatment

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system that is operated by the County of Madera. Table 1 describes the active wells along with the estimated capacities of each well.

Table 1
Source Capacity

Source	PS Code	Capacity, gpm
Ditton Well 1 (Forest Ridge)	2010007-001	60*
Ditton Well 2 (Forest Ridge)	2010007-002	29
Ditton Well 3 (Forest Ridge)	2010007-003	35*
Sierra Lakes Well 1A	2010007-007	130
Sierra Lakes Well 3	2010007-009	134
Sierra Lakes Well 4	2010007-010	180*
Ditton Well 4 (Forest Ridge)	2010007-024	30
Junction Well 2	2010007-028	30
Sierra Lakes Well 5	2010007-030	60*
Sierra Lakes Well 6	2010007-031	35*
Sierra Lakes Well 7	2010007-032	100*
Sierra Lakes Well 8	2010007-033	160
Sierra Lakes Well 9	2010007-034	32*
Quail Meadows Well 2	2010007-039	23
Quail Meadows Well 3	2010007-040	28
Quail Meadows Well 4	2010007-041	43
Combined Source Capacity of Active Wells		1,109

Note: For source capacity's marked "*", Hillview practices voluntarily "throttling down" some of their sources. HWC can operate these sources at higher production rates, but chooses to throttle down to maintain pumping and aquifer levels throughout the year.

Additional capacity from the standby and pending wells would be currently available in an extended emergency situation. It is estimated that an additional 950 gpm is available from these sources.

1.2 PERMIT COMPLIANCE

OSL currently operates under a domestic water supply permit (No. 03-11-96P-001) that was granted by the State Waterboards, Merced District Office of the Division of Drinking Water (formerly the California Department of Public Health) in December 1996. The water supply permit contains 15 special provisions which are listed as follows:

1. The Hillview Water Company is permitted to use the following groundwater sources as active sources in the Oakhurst-Sierra Lakes water system:

Forest Ridge Well No. 1 (a.k.a. Ditton Well No. 1)
Forest Ridge Well No. 2 (a.k.a. Ditton Well No. 2)
Forest Ridge Well No. 3 (a.k.a. Ditton Well No. 3)
Junction Well No. 1
Sierra Lakes Well No. 1A
Sierra Lakes Well No. 3

Sierra Lakes Well No. 4
Yosemite High School Well No. 2
Yosemite High School Well No. 3

The Water Company may also use the Pierce Lakes Well No. 1 provided that the water produced from the well meets all the primary and secondary drinking water standards, or that adequate treatment is provided if the well does not meet the drinking water standards. No other sources are allowed for use in the water system without prior written approval from the Drinking Water Field Operations Branch.

Status – Although some of the sources status may have changed or new wells will be formally added to a permit once the OSL funding projects are completed. Hillview is generally in compliance with this provision.

2. The Hillview Water Company is permitted to use iron and manganese removal treatment facilities for Forest Ridge Wells Nos. 1, 2, and 3; and for Sierra Lakes Wells Nos. 3 and 4; provided that the treatment operations are under the responsibility of a water treatment operator having a valid Grade II or higher water treatment plant operator certification.

Status – At the time of report preparation, both the Sierra Lakes and Forest Ridge iron and manganese removal treatment facilities have been disassembled and relocated to other Hillview systems. A permit to operate the replacement facilities (and a uranium removal facility) will be prepared once the OSL funding projects are completed.

3. The Hillview Water Company is permitted to use hypochlorination facilities for all active wells in the Oakhurst-Sierra Lakes water system provided that the treatment operations are under the responsibility of a water treatment operator having a valid Grade II or higher water treatment plant operator certification.

Status – Hillview is in compliance with this provision.

4. The treatment operations approved in Provisions Nos. 2 and 3 shall be under the direct responsibility of a Grade II or higher water treatment plant operator before July 1, 1997.

Status – Hillview is in compliance with this provision.

5. The Hillview Water Company must develop an operations plan for the iron and manganese removal treatment facilities. The operations plan shall consist of a description of all the treatment facilities; treatment plant performance monitoring program; unit process equipment operations and maintenance program; operating personnel, including number of staff, certification levels and responsibilities; how and when each unit treatment process is operated; laboratory procedures; procedures used to determine chemical dose rates; records; response to plant emergencies; and reliability features. The plan shall be submitted to DWFOB by April 30, 1997.

Status – Because Hillview is in the midst of two funding projects to replace their existing facilities and add uranium treatment, once the funding projects are completed, the Merced District Office will be issuing a permit that will address this provision for their

current treatment operations.

6. The Hillview Water Company shall monitor the active sources according to the Water Quality Monitoring Schedule attached in Appendix E of the Engineering Report. In addition, the Water Company shall conduct the following special monitoring programs:
 - a. Monitor Sierra Lakes Wells Nos. 1A, 3, and 4, and the outlet of the Sierra Lakes storage tanks; and Yosemite High School Wells Nos. 2 and 3, and the outlet of the 420 Reservoir for uranium levels on a monthly frequency to determine the effectiveness of the uranium blending program.
 - b. Test the raw and treated water iron and manganese levels at both treatment plants daily with the use of a field test kit and at least monthly by an approved laboratory.

All water quality monitoring results obtained in a calendar month shall be submitted to the Merced District Office of the DWFOB by the tenth day of the following month.

Status – Hillview is in compliance with this provision.

7. The Hillview Water Company shall monitor the active sources monthly for total coliform bacteria. If a positive total coliform sample is detected, the sample shall also be analyzed for fecal coliform or E. coli bacteria. The results of positive coliform bacteria tests shall be reported as a density (MPN/100 ml), and not just as the presence of coliform bacteria.

Status – Hillview is in compliance with this provision.

8. The Hillview Water Company shall conduct an investigation to determine the possible influence of surface water on Junction Well No. 1. A plan and time schedule describing the investigation shall be submitted to the Merced District Office of the DWFOB by January 31, 1997.

Status – Hillview currently has this source classified as standby and a determination will be made regarding surface water influence if or when the well is requested to be reclassified as active.

9. The Hillview Water Company must submit a revised bacteriological sample siting plan that reflects the current bacteriological sampling program for the Oakhurst-Sierra Lakes water system. The plan shall be submitted to the Merced District Office of the DWFOB by January 31, 1997.

Status – Hillview is in compliance with this provision. A current, approved BSSP dated September 20, 2016, is on file with the Division.

10. The Hillview Water Company shall conduct an ongoing well production and water level monitoring program for all active wells. Well production and water level data (static and/or pumping water levels) shall be recorded from all active wells at least 5 days a week and 2 days a month, respectively, during the months of May through September. During the remainder of the year, well production and water level data shall be obtained from all active wells at least 3 days a week and 1 day a month, respectively. Monthly reports of the well monitoring data shall be submitted to the Merced District Office of the DWFOB.

Status – Hillview is in compliance with this provision.

11. The Hillview Water Company shall not extend water service to any new developments without prior written approval by the DWFOB.

Status – Hillview has added additional sources that improved source capacity and the CPUC lifted this moratorium on November 7, 2007.

12. The operators must measure the chlorine residual levels in the distribution system at the same time when bacteriological samples are collected. The chlorine residual levels must be included with the bacteriological monitoring reports that are submitted to the Merced District Office of the DWFOB.

Status – Hillview is in compliance with this provision.

13. The Water Company must develop a plan and time schedule to install standby power at the Sierra Lakes Well Field. The plan and time schedule shall be submitted to the Merced District Office of the DWFOB by April 30, 1997.

Status – Due to the age of this permit, a file review response was not researched. What can be said though is that there currently are no existing generators within the OSL water system. The current funding projects had previously identified both a portable and fixed generator to be considered for purchase. However, due to cost changes for the larger ticket items such as water treatment, they have been removed from any current contracts that already have been awarded. There are currently two switchgear locations where a portable generator could be set up for immediate use though. Those locations are at Site 9, where water is boosted to the Indian Springs/Tank 10A area and at the site of the Courtney #1 and #2 tanks, where a booster system is necessary to provide sufficient pressure to connections there.

14. The Water Company shall notify the Merced District Office of the DWFOB in writing of any proposed changes to any plan or program associated with the operation of the water system at least 30 days prior to implementing the changes.

Status – Hillview is in compliance with this provision.

15. The Water Company shall submit an annual report describing any water system improvements and/or changes completed during the year, and any proposed improvements and/or changes for the following year. The report shall include an assessment of the water supply and water demand characteristics observed during the year. The report must include a discussion on water supply exploration when the peak day water demand approaches 90 percent of the available water supply. The report shall cover the calendar year and be submitted to the Merced District Office of the DWFOB by March 31 of every year.

Status – Annual Reports that specifically address this provision were not readily found. However, the OSL water system has already secured funding to address water sources and source capacity concerns. This provision was created more by a time when HWC was not able to meet the consumer's demands which prompted water conservation and moratoriums on water service connections were prevalent (and this is no longer the case).

With the exceptions of 8, 13 and 15, OSL is in compliance with the other permit provisions.

The Division recognizes that the 1996 permit will most likely no longer be valid. We are waiting for the Proposition 50 and 84 Construction funding projects to be completed and closed out, so that a revised permit can be issued. The permit will address the new treatment plants, storage

facilities and sources with new provisions for their continued operations. It is anticipated that construction will be complete by June 2018 and a revised permit will be issued by the end of 2018.

1.3 ENFORCEMENT HISTORY

OSL has received the following Compliance Orders from the Division:

Compliance Order, 03-11-97O-002, issued September 1997

OSL has active sources which exceed the MCL for uranium. The system has secured funding from Propositions 50 and 84 for new sources and treatment facilities.

Compliance Order, 03-11-09O-001, issued January 2009

OSL has active sources which exceed the MCL for arsenic. The system has secured funding from the Proposition 50 and 84 programs for new sources and treatment facilities.

This Compliance Order was amended June 12, 2015, (Amendment One to Compliance Order No. 03-11-09O-001) to address the revised return to compliance date by the Order and direct correspondence regarding the Order to Kassy Chauhan, the new Merced District Engineer. The return to compliance for arsenic MCL's is July 1, 2018.

OSL has two projects (Proposition 50 (P50), also known as Forest Ridge and 84 (P84) funding projects) to address iron, manganese, nitrate, arsenic and uranium MCL exceedances. As a requirement of the compliance orders, Hillview is to provide quarterly progress reports to the Merced District with updates on the status of the funding projects and the estimated date of completion. The project plans have been reviewed and approved. However, due to the Oakhurst-Sierra Lakes project bids coming in over budget and over the remaining funds available, Hillview requested and received approval to cross project systems and funding sources to consolidate bids in an effort to reduce the overall project costs with their available funds remaining. Hillview has elected to pay for and complete some of the work themselves in order to keep the project on time and within the limits of the funding budgets remaining. Most of the consolidated bid project plans and specifications have been approved such as the arsenic/iron/manganese filtration systems at Forest Ridge and Sierra Lakes, the uranium removal facility at Sierra Lakes and six storage facilities. No contracts have been awarded yet for fencing and security, a potential portable and fixed generator and a sludge hauling truck.

II. INVESTIGATION AND FINDINGS

2.1 Sources of Supply

Hillview is extracting groundwater from hard rock wells in an area that is not adjudicated or otherwise restricted. The domestic water supply is obtained from sixteen active wells which are monitored under the requirements of the Community Medium Groundwater Near Development (CMGD) monitoring schedule enclosed in Appendix A. The water produced by these sources is continuously chlorinated. All sanitary setback requirements are met. The water produced by the Sierra Lakes wells and the Ditton wells had been receiving iron and manganese removal treatment, however, with the onset of the funding projects arsenic, uranium, iron and manganese treatment, the facilities have been removed. They were recently taken off line and dismantled so that the infrastructure work could begin at their former Sierra

Lakes and Forest Ridge locations (the actual dates of destruction were Sierra Lakes 5/24/2017 and Forest Ridge 3/30/2016).

All of the wells pump to storage tanks before entering the distribution system. The wells are controlled by the water levels in the receiving tanks. Water from the storage tanks gravity feeds the distribution system.

Sources

Active Wells

Although most of the OSL wells were installed before the revised Waterworks Standards were established (2008), only some of the sites have the required permanent security as defined in the regulations. Some locations do have security fencing in place, but at other locations the wells are located in open areas. The funding programs were to initially include correcting security measures of existing sources and be part of the new wells that were constructed. However, the projects bids came in over budget so HWC will be responsible for making the necessary improvements. *Please provide a written description and time schedule of how Hillview will address their remaining well site security requirements with a permanent solution by December 31, 2017. The Division requires that all sites have adequate security to prevent tampering and vandalism of their sources of supply.*

Currently, all wells are either disinfected at an individual wellhead, where a group of wells combine as one before going into a distribution main, post storage tanks or post water treatment. The location of the disinfection treatment will be more thoroughly described in the treatment section of this report.

Ditton Well 1 (Forest Ridge, Active Raw) PS Code 2010007-001

Ditton Well 1 was drilled in 1985 to a depth of 255 feet. In 2009, this well was deepened to a depth of 607 feet. A 12-inch diameter steel conductor casing is present to a depth of 20 feet. The well features an 8-inch diameter steel casing that extends into granite bedrock to a depth of 50 feet. A 50 foot cement grout annular seal is provided. The casing extends above the well surface seal 20-inches and discharges through a 1-inch production meter to the former iron and manganese treatment facility at Forest Ridge. This source now discharges to the Forest Ridge replacement tanks. The concrete well pad/surface seal is approximately 8-feet by 4-feet by 4-inches exposed above the ground surface.

The well is equipped with a 10-hp submersible pump that was producing 60 gpm at the time of the inspection. It should also be noted that the wells production has been throttled down in order to not over pump the well. The well's appurtenances include a sounding tube, a raw water sample tap, chlorine injection port, and a flow meter. This well site continues to remain unsecured.

Ditton Well 2 (Forest Ridge, Active Raw) PS Code 2010007-002

Ditton Well 2 was drilled in 1987 to a depth of 325 feet. A 12-inch diameter steel conductor casing is present to a depth of 11 feet. The well features an 8-inch diameter steel casing that extends into bedrock to a depth of 55 feet. A 55 foot cement grout annular seal is provided. The well casing extends above the well surface seal approximately 16-inches and discharges through a 2-inch production meter. The concrete well surface seal measures approximately 4-feet by 4-feet by 6-inches exposed above the ground surface. *It was observed during the*

inspection that a corner of this surface seal was undermined, exposing a gap between the concrete pad and ground surface. This was brought to the attention of HWC and they said this might be attributed to the sample tap being above this location and could be eroding away the soil when the tap is flushed for sample collection. This exposed area should be supplemented with soil and/or gravel to minimize further eroding when samples are collected or the sample tap location should be evaluated for relocating due to this occurrence.

The well is equipped with a 15-hp submersible pump that produces 29 gpm. The well's appurtenances include a sounding tube, a threaded raw water sample tap, chlorine injection port, and a flow meter. The well site is secured with a locked slatted fence topped with razor wire. This site has chlorination equipment set up to provide a continuous dose into the distribution system. The equipment consists of a peristaltic feeder (rated to deliver a maximum rate of 16 gpd @100 psi) and a 50-gallon plastic tank.

The 2013 inspection report noted that the well casing was in poor condition. The Division recommends that HWC replace the top portion (above grade) of the casing the next time the pump is pulled. It did not appear that this has been replaced and the condition has not changed. However, there were no visible holes or leaks noted during the 2016 inspection. This recommendation and repair of the well pad must be addressed the next time that this pump is removed for repairs.

Ditton Well 3 (Forest Ridge, Active Raw) PS Code 2010007-003

Ditton Well 3 was drilled in 1988 to a depth of 605 feet. A 12-inch diameter steel conductor casing is present to a depth of 12 feet. The well features an 8-inch diameter steel casing that extends into bedrock to a depth of 52 feet. A cement grout annular seal is provided to a depth of 52 feet. The well casing extends above the well surface seal approximately 12-inches and discharges through a 1 ½-inch production meter. The concrete well surface seal measures approximately 4-feet by 6-feet by 3-inches exposed above the ground surface.

The well is equipped with a 10-hp submersible pump that produces 35 gpm. This source, like others has been voluntarily throttled down by HWC in order to maintain more stable pumping and static water levels. The well's appurtenances include a sounding tube, a raw water sample tap, chlorine injection port, and a flow meter. This well site was previously identified as unsecured, but HWC has since installed temporary security fencing at this location. The contained and fenced area is approximately 14 feet by 28 feet.

At this location it was observed that the electrical box connected to the well casing had an exposed hole. This was covered or plugged with a sample jar. This was discussed with HWC and is not sufficient to prevent potential contamination from entering the well casing. HWC was directed in the field to provide a permanent plug. If this has not been addressed yet, this must be repaired by December 31, 2017.

Ditton Well 4 (Forest Ridge, Active Raw) PS Code 2010007-024

Ditton Well 4 was drilled in 1999 to a depth of 700 feet. A 14-inch diameter steel conductor casing is present to a depth of 14 feet. The well features an 8-inch diameter casing that extends into bedrock to a depth of 100 feet. A cement grout annular seal is provided to a depth of 100 feet. The well casing extends above the well surface seal approximately 25-

inches and discharges through a 2-inch production meter. The height from the concrete surface seal to the conductor casing is only about 9-inches. The concrete well surface seal measures approximately 5-feet by 5-feet by 4-inches exposed above the ground surface.

The well is equipped with 7.5-hp submersible pump which produces 30 gpm. The well's appurtenances include a sounding tube, a raw water sample tap, and a flow meter. The well site is secured with a locked, chain-link fence with privacy slats and topped with razor wire.

Sierra Lakes Well 1A (Active Raw) PS Code 2010007-007

Sierra Lakes Well 1A was drilled in 1988 to a depth of 380 feet. A 12-inch diameter steel conductor casing is present to a depth of 8 feet. The well features an 8-inch diameter steel casing that extends into bedrock to a depth of 50 feet. A cement grout annular seal is present to a depth of 50 feet. The well casing extends above the well surface seal approximately 16-inches and discharges through a 3-inch production meter. The concrete well surface seal measures approximately 4-feet by 4-feet by 3-inches exposed above the ground surface.

The well is equipped with a 25-hp submersible pump which produces about 130 gpm. The well's appurtenances include a check valve, flow meter, sounding tube, and raw water sample tap. This well site was previously identified as unsecured, however, during the inspection it was noted that temporary fencing has been installed securing a 14 foot by 28 foot area around the well. Sierra Lakes Well 1A is monitored by the SCADA system. This site has chlorination equipment set up to provide a continuous dose into the distribution system. The equipment consists of a peristaltic feeder (rated to deliver a maximum rate of 1.5 gph @150 psi) and a 55-gallon plastic tank.

During the inspection it was noted that there was a small gap near the sounding tube which causes concern about a potential contamination entrance point. *Please address this sounding tube gap and ensure that there are no entrances for potential contamination to this or any water source. Please address this by December 31, 2017.*

Sierra Lakes Well 3 (Active Raw) PS Code 2010007-009

Sierra Lakes Well 3 was drilled in 1980 to a depth of 480 feet. A 12-inch diameter steel conductor casing is present to a depth 4 feet. The well features an 8-inch diameter steel casing that extends into bedrock to a depth of 57 feet. A cement grout annular seal is present to a depth of 50 feet. This well was deepened in 2004 from 480 to 682 feet. The well casing extends above the well surface seal approximately 21-inches and discharges through a 3-inch production meter. The concrete well surface seal measures approximately 4-feet by 4-feet by 6-inches exposed above the ground surface. *It was noted to HWC during the inspection that a portion of the well surface seal appeared to be undermined and a void between the well seal base and ground surface was noted. This presents a concern for contaminants to enter the well through this breach. It will be required for this well base to be repaired or the surface seal replaced. Photo documentation of the repair must be provided by December 31, 2017.*

The well is equipped with a 30-hp submersible pump which was producing about 134 gpm at the time of the inspection. The well's appurtenances include a check valve, sounding tube, chlorination port, threaded hose bib, and a flow meter. The well site is secured with a slatted chain link fence topped with razor wire. This well is monitored by the SCADA system. This site has chlorination equipment set up to provide a continuous dose into the distribution system. The equipment consists of a peristaltic feeder and a 50-gallon plastic tank. However, due to

the water treatment plant construction, this source was temporarily off-line at the time of report preparation.

Sierra Lakes Well 4 (Active Raw) PS Code 2010007-010

Sierra Lakes Well 4 was drilled in 1985 to a depth of 400 feet. A 12-inch diameter steel conductor casing is present to a depth of 14 feet. The well features an 8-inch diameter steel casing to a depth of 50 feet. The Well Driller's Report indicates that there is a cement grout seal. However, it does not specify to what depth it is located. In 2004, the well was deepened to a depth of 750 feet. The well casing extends above the well surface seal approximately 16-inches and discharges through a 3-inch production meter. The concrete well surface seal measures approximately 4-feet by 4-feet by 3-inches exposed above the ground surface. *It should be noted too that this source is not on level ground and uphill of the surface seal has some soil that has eroded onto it. On the downhill side, some of the surface seal appears to be undermined and eroded away, exposing the bottom of the surface seal. This was brought to the attention of HWC during the inspection to fix or reroute drainage to minimize potential contamination of the source and eroding of the well surface seal. It will be required for this well base to be repaired and/or replaced. Photo documentation of the repairs must be provided by December 31, 2017.*

This well is equipped with a 30-hp submersible pump which produces about 180 gpm. It is also important to note that this well's production is throttled down to minimize the potential of over drafting the fractured rock water supply. The well's appurtenances include a check valve, flow meter, sounding tube, and raw water sample tap. This well is monitored by the SCADA system. *Although the well site is still unsecured, it is located adjacent to a single family dwelling. Fencing would further reduce the potential for tampering or vandalism, but hopefully the homeowner would report any suspicious activity to HWC if observed.*

Sierra Lakes Well 5 (Active Raw) PS Code 2010007-030

Sierra Lakes Well No. 5 was drilled in 2000 to a depth of 1000 feet. A 13 5/8-inch diameter conductor casing is present to a depth of 17 feet. The well features an 8-inch diameter steel casing to a depth of 100 feet. A cement grout annular seal is present to a depth of 100 feet. The well casing extends above the well surface seal approximately 27-inches and discharges through a 2-inch production meter. The concrete well surface seal measures approximately 3-feet by 3-feet by 6-inches exposed above the ground surface.

The well is equipped with a 20-hp submersible pump which produces about 60 gpm. This source is also one where the well's production is throttled down to minimize the potential of over drafting the fractured rock water supply. The well's appurtenances include a check valve, flow meter, sounding tube, and raw water sample tap. The well site is secured with a slatted, chain-link fence topped with razor wire. A portion of this fence was taken down for well repairs. Because of this, when completed, HWC plans to add a double gate in the future for well access and that the fence does not have to be dismantled again for repairs. This well is monitored by the SCADA system.

A minor drip was noted on the sample tap during the inspection and HWC was directed to fix this in the field. If this has not been addressed yet, please fix this leak by December 31, 2017.

Sierra Lakes Well 6 (Active Raw) PS Code 2010007-031

Sierra Lakes Well No. 6 was drilled in 2005 to a depth of 1407 feet. A 14-inch diameter steel conductor casing is present to a depth of 12 feet. The well features an 8 5/8-inch diameter steel casing to a depth of 100 feet. The well had a cement annular seal to a depth of 100 feet. The well casing extends above the well surface seal approximately 20-inches and discharges through a 2-inch production meter. The concrete well surface seal measures approximately 4-feet by 4-feet by 5-inches exposed above the ground surface.

The well is equipped with a 20-hp submersible pump which was producing about 35 gpm at the time of the inspection. This is another Hillview source that is voluntarily throttled down in an attempt to maintain pumping current water levels. The well's appurtenances include a check valve, flow meter, sounding tube, well sounder and raw water sample tap. The well site is unsecured. This well is monitored by the SCADA system.

Sierra Lakes Well 7 (Active Raw) PS Code 2010007-032

Sierra Lakes Well No. 7 was drilled in 2006 to a depth of 482 feet. A 14-inch diameter steel conductor casing is present to a depth of 20 feet. The well features an 8 5/8-inch diameter steel casing to a depth of 100 feet. A cement annular seal is present to a depth of 100 feet. The well casing extends above the well surface seal approximately 24-inches and discharges through a 2-inch production meter. The concrete well surface seal measures approximately 4-feet by 4-feet by 5-inches. *During the inspection it was observed that erosion has placed soil over some of the well surface seal. HWC should attempt to direct any surface water drainage away from their well sites. It will be required for this well base to be repaired and/or replaced. Photo documentation of the repair must be provided by December 31, 2017.*

The well is equipped with a 30-hp submersible pump and has been noted as capable of producing about 290 gpm. However, this source is also throttled down and was producing about 100 gpm at the time of the inspection. Jim Foster has stated that in the summer months they will run this source at about 50 to 60 gpm. The well's appurtenances include a check valve, flow meter, sounding tube, and raw water sample tap. The well site is unsecured. This well is monitored by the SCADA system.

Sierra Lakes Well 8 (Active Raw) PS Code 2010007-033

Sierra Lakes Well No. 8 was drilled in 2006 to a depth of 907 feet. A 14-inch diameter steel conductor casing is present to a depth of 30 feet. The well features an 8 5/8-inch diameter steel casing to a depth of 100 feet. A cement annular seal is present to a depth of 100 feet. The well had a cement annular seal to a depth of 100 feet. The well casing extends above the well surface seal approximately 24-inches and discharges through a 3-inch production meter. The concrete well surface seal measures approximately 4-feet by 4-feet by 6-inches exposed above the ground surface.

The well is equipped with a 25-hp submersible pump which produces about 160 gpm. The well's appurtenances include a check valve, flow meter, sounding tube, and raw water sample tap. The well site is unsecured. This well is monitored by the SCADA system.

Sierra Lakes Well 9 (Active Raw) PS Code 2010007-034

Sierra Lakes Well No. 9 was drilled in 2005 to a depth of 1307 feet. A 14-inch diameter conductor casing is present to 6 feet. The well features an 8 5/8-inch diameter steel casing to a depth of 100 feet. A cement annular seal is present to a depth of 100 feet. The well casing extends above the well surface seal approximately 24-inches and discharges through a 3-inch production meter. The concrete well surface seal measures approximately 3-feet by 3-feet by 6-inches exposed above the ground surface.

The well is equipped with a 10-hp submersible pump which was producing about 30 gpm at the time of the inspection. Jim Foster noted that this is another of the Hillview wells where they have voluntarily throttled it down in order to preserve or minimize the reduction in pumping water rates and levels. The well's appurtenances include a check valve, flow meter, sounding tube, gravel chute, and raw water sample tap. The well site is secured with a slatted, chain-link fence enclosure that is locked and topped with razor wire.

Junction Well 2 (Active Raw) PS Code 2010007-028

Junction Well 2 was drilled in 1978 to a depth of 220 feet. The well features an 8-inch diameter steel casing that extends into bedrock to a depth of 100 feet which is perforated from 60 to 100 feet. The well is gravel packed from 60 to 100 feet. A cement grout annular seal is present to a depth of 50 feet. The well casing extends above the well surface seal approximately 10-inches and discharges through a 1-inch production meter. The concrete well surface seal measures approximately 7-feet by 10-feet.

The well is equipped with 5-hp submersible pump which produces about 30 gpm. The well's appurtenances include a check valve, chlorination port, flow meter, raw water sample tap, and a sounding tube. The well site is secured with a chain link fence topped with razor wire.

Junction Well 2 is currently being monitored on an annual basis for tetrachloroethylene (PCE) and on a quarterly basis for chloroform. Although annual sampling may be the current requirement, a review of the results in the state database indicate that this source is being monitored at least quarterly for this constituent. From 2013 to present, the PCE results have been non-detect (ND). The chloroform monitoring of this source is being done quarterly and the results since 2013 have been ND also.

During the inspection it was noted that a well house structure has been constructed for this source. The General Manager explained that since this well would be located adjacent to some apartments currently under construction, a building was constructed to both hide and secure the well. The well building also contains on-site chlorination equipment consisting of a peristaltic injection feeder (rated to deliver up to 1.5 gph @ 150 psi) and a 30-gallon plastic chemical tank. Because the concrete well surface seal is the floor of the well house, the thickness of the concrete was not determined, but presumed to be approximately 4 to 6-inches thick.

Quail Meadows Well 2 (Active Raw) PS Code 2010007-039

Quail Meadows Well 2 was drilled in 1980 to a depth of 450 feet. The well features a 6-inch diameter plastic casing that extends into bedrock to a depth of 50 feet. This well contains no gravel pack. A concrete annular seal is present to a depth of 50 feet. The well casing extends above the well surface seal approximately 6-inches above the concrete floor and discharges

through a 1-inch production meter. The concrete well surface seal encompasses the entire floor of the approximately 6-foot by 6-foot wood framed building containing the well.

The well is equipped with 10-hp submersible pump which produces about 23 gpm. The well's appurtenances include a check valve, chlorination port, flow meter, raw water sample tap, and a sounding tube. It is important to note that during the inspection the hole for the flush-to-waste pipe that penetrates the well building was larger than the pipe itself. *The hole is quite a bit larger than the pipe and could be an unwanted entrance point for rodents or other undesirables to the well house. This was brought to the attention of HWC for correction. It was also noted that during the inspection and brought to the attention of HWC, the flushing pipe for the well's alternate discharge was not screened. If these items have not been corrected yet, then they need to be addressed by December 31, 2017.*

Quail Meadows Well 3 (Active Raw) PS Code 2010007-040

Quail Meadows Well 3 was drilled in 1980 to a depth of 485 feet. The well features a 6-inch diameter plastic casing that extends into bedrock to a depth of 73 feet. A concrete grout annular seal is present to a depth of 73 feet. The well casing extends above the well surface seal approximately 12-inches and discharges through a 2-inch production meter. The concrete well surface seal encompasses the entire floor of the approximately 6-foot by 6-foot wood framed building containing the well.

The well is equipped with 10-hp submersible pump which produces about 28 gpm. The well's appurtenances include a check valve, chlorination port, flow meter, raw water sample tap, and a sounding tube. During the inspection it was noted that there were a few holes in the well building that need to either be filled or used for a pipe penetration. And that the discharge or flushing pipe was not adequately screened. Both concerns must be addressed by HWC. *If not filled or the pipe screened, the holes could be an unwanted entrance point for rodents or tampering to the well house. This was brought to the attention of HWC for correction. If they have not been corrected yet, then HWC needs to address this by December 31, 2017, and provide photo documentation of the repairs.*

Quail Meadows Well 4 (Active Raw) PS Code 2010007-041

Quail Meadows Well 42 was drilled in 2002 to a depth of 453 feet. The well features a 7 5/8-inch diameter PVC casing that extends into bedrock to a depth of 55 feet. A bentonite annular seal is present to a depth of 55 feet. The well casing extends above the well surface seal approximately 18-inches and discharges through a 3/4-inch production meter, although the main discharge piping is 2-inch diameter. The concrete well surface seal encompasses the entire floor of the approximately 6-foot by 6-foot wood framed building containing the well.

The well is equipped with a 7.5-hp submersible pump which produces about 43 gpm. The well's appurtenances include a check valve, chlorination port, flow meter, raw water sample tap, and a sounding tube. During the inspection it was noted that there were a few holes in the well building that need to either be filled or used for a pipe penetration. It was also observed that a flushing discharge line was not screened. *If not filled, the holes could be an unwanted entrance point for rodents or tampering to the well house. This was brought to the attention of HWC for correction. If these concerns have not been corrected yet, then HWC needs to address this by December 31, 2017.*

Standby Wells

Junction Well 1 (Standby Raw) PS Code 2010007-017

Junction Well 1 was drilled in 1978 to a depth of 195 feet. The well features an 8-inch diameter steel casing extends into bedrock to a depth of 60 feet which is perforated from 52 to 60 feet. The well is gravel packed from 52 to 60 feet. A cement grout annular seal is present to a depth of 50 feet. The well casing extends above the well surface seal approximately 28-inches and discharges through a 1-inch production meter. The concrete well surface seal measures approximately 5-feet by 10-feet by 4-inches exposed above the ground surface. The well site is secured with a locked slatted chain link fence. The well's appurtenances include a sounding tube, a raw water sample tap, and a flow meter.

The well has been offline due to high levels of tetrachloroethylene (PCE). At the time of report preparation, the well is pending further testing. HWC believed that the contamination was due to a hole in the side of the casing. In October 2011, HWC replaced the pump and drop pipe in the well. A 5-hp submersible pump was installed and is thought to produce up to 50 gpm. However, the well's yield is pending further testing and is unknown at this time. The well was last sampled for PCE in April 2017 and the result was 1.7 µg/L. The MCL for PCE is 5 µg/L.

Inactive Wells

Hillview currently has six inactive wells that have not been used and there are currently a sufficient number of active sources to meet current water system demands. Most of these wells have been off line for some time and due to high levels of uranium and low production, most likely will not be rehabilitated. HWC has indicated that once the funding projects including treatment facilities are on line, they will further evaluate the future of these sources. *HWC must provide a plan and time schedule to either reactivate each of these inactive sources or properly destroy them. Until these well locations are reactivated or destroyed, HWC must visit each location at least quarterly to ensure that the current sanitary conditions of the sources are adequate. Site visits should be more frequent if these locations have not been secured with locked fencing or other deterrents to minimize the potential for unauthorized access or tampering.*

Highland View 1 (Inactive Untreated) PS Code 2010007-004

This well is located adjacent to the Highland View Well No. 2, which is above Well No. 1 near the 420 storage tank. Drilled in 1989 to a depth of 680 feet, the well features an 8 5/8-inch diameter steel casing that extends into granite bedrock to a depth of 51 feet. The well has a cement grout annular seal to a depth of 50 feet and is still equipped with a 3 HP submersible pump that discharges to the 420 reservoir. The major water producing fractures were at 121 feet, 325 feet, 377 feet, 543 feet, 565 feet and 596 feet. It appears that this well is adequately sealed against surface water intrusion by a 3 foot by 3 foot by 4.5-inch thick concrete pump base. This well reportedly has been off line for some time due to uranium levels over the MCL. This source is both physically (air gap) and electrically disconnected from the OSL system.

Highland View 2 (Inactive Untreated) PS Code 2010007-005

This well is located adjacent to the 420 reservoir and Highland View Well No. 1. Drilled to a depth of 950 feet in 1990, the well features an 8-inch diameter steel casing that extends into granite to a depth of 80 feet. The well has a cement grout annular seal to a depth of 80 feet and is still equipped with a 5 HP submersible pump that discharges to the 420 reservoir. The major water producing fractures were at 405 feet and 873 feet. It appears that this well is adequately sealed against surface water intrusion by a surface concrete pump base 3 feet by 3 feet by 4-inches thick. This well reportedly has been off line for some time due to uranium levels over the MCL. This source is both physically (air gap) and electrically disconnected from the OSL system.

Pierce Lake Well No. 1 (Inactive Untreated) PS Code 2010007-006

This well is located in the Pierce Lakes subdivision, near the Yosemite High School Wells. The well was drilled to a depth of 860 feet in 1985. It contains an 8-inch diameter steel casing that extends into granite bedrock to a depth of 50 feet. The well has a cement grout annular seal, also to a depth of 50 feet. The major water producing fractures are at 290 feet, 315 feet, 564 feet, 680 feet, and 828 feet. It appears that this well may be adequately sealed against surface water intrusion. The well is still equipped with a 15 HP submersible pump that would discharge to the Yosemite High School pumping forebay.

This well is located within 150 feet from a leachfield, less than the distance specified in the State Water Well Standards. A waiver was granted by the Division to the Hillview Water Company in a letter dated March 29, 1994. The waiver requires a minimum separation of 100 feet between the well and the leach lines. The waiver stipulates that the well is to be monitored monthly for total coliform bacteria. The use of the well is to be discontinued if at any time the well produces fecal coliform or *E. coli* bacteria. This source had historical high uranium content and when the arsenic MCL was proposed to be reduced, the wells' level would exceed the new level of 10 µg/L for arsenic. This source has been inactive for quite a long time now. HWC indicates that this source eventually will be to formally destroy this source. This source is both physically (air gap) and electrically disconnected from the OSL system.

Sierra Lakes Well 2 (Destroyed) PS Code 2010007-008

This is an inactive well located in the Sierra Lakes subdivision, and was located within the Sierra Lakes Water Treatment Facility. The well was one of the original subdivision wells and was drilled to a depth of 308 feet in 1961. The well features a 6-inch diameter casing that extends to an unknown depth. It is also unknown if the well has an annular seal since there is no Well Drillers Report for this well. The well was active until 1987 when the water level dropped to the pump intake level, and the pump was damaged. The pump has never been replaced in the well.

This well has now been formally permitted and destroyed in preparation for the infrastructure, treatment facilities and tanks to be located at the Sierra Lakes Treatment Plant. The well destruction was completed July 21, 2017. The one concern on the destruction, was that the bottom 288 feet was backfilled with ¾-inch gravel and the top 30 feet of the well was filled with bentonite chips that were saturated. Since bentonite is now considered an unsuitable material for the annular seal, it has been questioned whether or not this material should also not be used for backfilling of destroyed wells.

Yosemite High School 2 (Inactive Untreated) PS Code 2010007-011

This well is located adjacent to Yosemite High School. The well was drilled to a depth of 310 feet in 1983. The well features an 8-inch diameter steel casing that extends into a granite bedrock to a depth of 56 feet. The well has a cement grout annular seal to a depth of 50 feet. The well was deepened in 1989 to a depth of 675 feet. A 1.5 HP submersible pump is still located in the well. This source is both physically (air gap) and electrically disconnected from the OSL system.

Yosemite High School 3 (Inactive Untreated) PS Code 2010007-012

Yosemite High School 3 was drilled in 1983 to a depth of 965 feet. A 10-inch diameter steel conductor casing is present to a depth of 23 feet. The well features an 8-inch diameter steel casing that extends into bedrock to a depth of 65 feet. A cement grout annular seal is present to a depth of 50 feet.

The well is equipped with 10-hp submersible pump. The well's appurtenances include a sounding tube, a raw water sample tap, and a flow meter. The well site is secured by a chain link fence topped with razor wire. The well is currently offline due to bacteriological issues. This source is both physically (air gap) and electrically disconnected from the OSL system.

Pending Wells

The OSL water system also has three more wells that were drilled under part of the P50 funding program, however, they have not been completed or developed yet. HWC is in the process of awarding contracts to install the above ground features for these sources. These sources will be connected to the Forest Ridge treatment facility and then go out into the distribution system.

Forest Ridge Well 5 (Pending) PS Code 2010007-046

Ditton Well 5 was drilled in 2015 to a depth of 575 feet. A 16-inch diameter steel conductor casing is present to a depth of 15 feet. The well features an 8 5/8-inch diameter steel casing that extends into bedrock to a depth of 105 feet. A pumped, neat cement annular seal is provided to a depth of 105 feet. The well casing extends above the well surface seal approximately 12-inches and discharges through a 4-inch production meter. The concrete well surface seal measures approximately 4-feet by 4.5-feet by 18-inches exposed above the ground surface based on the Proposition 50 funding project plans. The plans also indicate that the well surface seal extends 12-inches below grade.

The well is equipped with a 40-hp submersible pump. The air-lift test during development indicated this source could produce 400 gpm. The well's appurtenances include an air-vacuum release, gravel chute/sounding tube, check valve, chlorine injection tap, flush to waste capability, a raw water sample tap, and a flow meter with transmitter for SCADA.

Forest Ridge Well 6 (Pending) PS Code 2010007-047

Ditton Well 6 was drilled in 2015 to a depth of 550 feet. A 16-inch diameter steel conductor casing is present to a depth of 15 feet. The well features an 8 5/8-inch diameter steel casing that extends into bedrock to a depth of 107 feet. A pumped, neat cement annular seal is

provided to a depth of 107 feet. The well casing extends above the well surface seal approximately 12-inches and discharges through a 4-inch production meter. The concrete well surface seal measures approximately 4-feet by 4.5-feet by 18-inches exposed above the ground surface based on the Proposition 50 funding project plans. The plans also indicate that the well surface seal extends 12-inches below grade.

The well is equipped with a 40-hp submersible pump. The air-lift test during development indicated this source could produce 400 gpm. The well's appurtenances include an air-vacuum release, check valve, gravel chute/sounding tube, chlorine injection tap, flush to waste capability, a raw water sample tap, and a flow meter with transmitter for SCADA.

Forest Ridge Well 7 (Pending) PS Code 2010007-048

Ditton Well 7 was also drilled in 2015 to a depth of 600 feet. A 16-inch diameter steel conductor casing is present to a depth of 15 feet. The well features an 8 5/8-inch diameter steel casing that extends into bedrock to a depth of 107 feet. A pumped, neat cement annular seal is provided to a depth of 107 feet. The well casing extends above the well surface seal approximately 10-inches and discharges through a 4-inch production meter. The concrete well surface seal measures approximately 4-feet by 4.5-feet by 18-inches exposed above the ground surface based on the Proposition 50 funding project plans. The plans also indicate that the well surface seal extends 12-inches below grade.

The well is equipped with a 30-hp submersible pump. The air-lift test during development indicated this source could produce 100 gpm. This was the only well that did not have any above ground appurtenances installed at the time of the inspection. The 8 5/8-inch diameter casing extended up above the well surface seal to a 90° ell with a blind flange bolted to it. Features based on the funding plans indicate this source will include an air-vacuum release, check valve, gravel chute/sounding tube, chlorine injection tap, flush to waste capability, a raw water sample tap, and a flow meter with transmitter for SCADA.

2.2 TREATMENT

At the time of the 2016 inspection, the Proposition 50 and 84 programs were materializing and some of the actual work had started or was about to begin. This included demolition of the existing storage tanks, Forest Ridge Treatment Plant and the Sierra Lakes Treatment Plant. This was necessary in order to install new infrastructure and prepare sites for concrete work including foundations and footings for replacement storage tank pads and filtration treatment facilities.

Previous inspection reports indicated that primary chlorination occurred at the Forest Ridge and Sierra Lakes treatment facilities to enhance the iron and manganese removal by the filters.

Prior to the inspection, the Forest Ridge (iron and manganese) treatment plant had been dismantled and components relocated to another Hillview water system (Coarsegold Highlands) on March 30, 2016. The Sierra Lakes (iron and manganese) treatment plant was dismantled on May 24, 2017, and components relocated to the Hillview Goldside water system.

Therefore, only wellhead chlorination of the applicable groundwater sources will be described here. When both of the funding projects treatment facilities are constructed, operations plans

are developed and the new treatment facilities consisting of arsenic, uranium, iron and manganese removal are constructed, the Division will be issuing a full permit with operating provisions for each facility at that time, including any applicable wellhead chlorination at a future date to be determined. However, the funding agreements for the Oakhurst-Sierra Lakes water system expires March 31, 2018.

Chlorination

Currently, most all of the OSL chlorination is provided at the well heads, however, at one location, Quail Meadows, the three Quail Meadows sources combine at the Quail Meadows Pump House, receive chlorination and then are boosted to the Quail Meadows Tank. From there, chlorinated water can enter the distribution system. Most, if not all, of the chlorination locations lack shelter from the elements and/or security concerns. The chlorination equipment and storage must be kept out of the direct sunlight and heat to minimize the degradation of the solutions strength. HWC has already had theft of chlorination equipment at another location and it would be just as, or more concerning, if the chlorine and/or equipment was tampered with, potentially impacting public health and safety. Table 2 provides a summary of all of the chlorination equipment within the OSL water system.

Table 2
Summary of Chlorination Equipment

Location	Chemical	Dilution	Feeder Info	Tank Size	Security/Shelter
Ditton Well 2	Sodium Hypochlorite	Neat	Peristaltic, 16 gpd @ 100 psi	50-gallon	Minimal. ½ piece of pipe covering feeder.
Junction Well 2	Sodium Hypochlorite	10:1 (water:sodium hypochlorite)	Peristaltic, 1.5 gph @150 psi	30-gallon	Inside locked well building.
Sierra Lakes Well 1A	Sodium Hypochlorite	Neat	Peristaltic, 1.5 gph @ 150 psi	55-gallon	Minimal, feeder located under a Styrofoam box.
Sierra Lakes Well 3	Sodium Hypochlorite				Off line due to SL WTP construction.
Sierra Lakes Well 5	Sodium Hypochlorite	Neat	Peristaltic, 1.5 gph @ 150 psi	55-gallon	Minimal, piece of wood covering feeder.
Sierra Lakes Well 7	Sodium Hypochlorite	Neat	Peristaltic, 0.21 gph @ 100 psi	55-gallon	Minimal, piece of wood covering feeder.

Quail Meadows Pump House	Sodium Hypochlorite	Neat	Peristaltic, 1.5 gph @ 150 psi	25-gallon	Sheltered, housed and secured.
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Ditton Well 2 (Forest Ridge)

The chlorination equipment at this source consists of a peristaltic pump, and 50-gallon polyethylene tank. The pump is rated to deliver at a maximum of 16 gpd at 100 psi. The 12.5 percent ANSI-NSF Standard 60-certified sodium hypochlorite solution is injected neat. At the time of the inspection, the chlorination feeder was sitting on top of the well surface seal and partially covered by what appears to be a piece of water pipe cut in half lengthwise to protect it from direct sunlight. The solution tank and chlorination equipment are outside adjacent to the well and exposed to the elements. *Due to chemical degradation and potential inability for operators to provide a consistent chlorine dose, it is highly recommended that this equipment be located in a secured building or at least under a shade structure. If the site is not protected by a security fence to contain a shade structure, the building provides added benefit for security in addition to less potential for chemical concentration loss. Please provide photo documentation that the well site security and shelter for chlorination has been installed by March 2018.*

Junction Well 2

The chlorination equipment at this source consists of a Grundfos injection feeder and a 30-gallon plastic solution tank. The feeder is rated to deliver at a maximum rate of 1.5 gph at 150 psi. The 12.5 percent ANSI-NSF Standard 60-certified sodium hypochlorite solution is injected diluted at a ratio of 10:1. At this location, both the feeder and tank are located within a secured, locked building that also contains Junction Well 2.

Sierra Lakes Well 1A

The chlorination equipment at this source consists of a peristaltic pump and a 60-gallon plastic solution tank. The Flexflo pump is rated to deliver at a maximum rate of 0.21 gph at 100 psi. The 12.5 percent ANSI-NSF Standard 60-certified sodium hypochlorite solution is injected neat. At the time of the inspection, the injection feeder was located inside a Styrofoam box, presumably to shelter it from UV sunlight and possibly heat. *However, the plastic solution tank was just on the well surface seal exposed to all elements and temperature extremes. At least the equipment is secured within temporary chain-link fencing. Please provide photo documentation that the well site shelter for chlorination has been installed by March 2018.*

Sierra Lakes Well 3

The chlorination equipment at this source has been relocated to Sierra Lakes Well 1A until the power at this location has been restored and the treatment plant is finished. It was noted during the inspection of this source, that HWC had improvised a shelter for the injection feeder consisting of two masonry blocks with a piece of wood over the top of it for shade. *However, the plastic solution tank was exposed to all elements and temperature extremes. Please provide photo documentation that the well site security and shelter for chlorination has been installed by March 2018.*

Sierra Lakes Well 5

The temporary chlorination equipment at this source consists of a peristaltic pump and a 60-gallon plastic solution tank. The pump is rated to deliver at a maximum rate of 0.21 gph at 100 psi. The 12.5 percent ANSI-NSF Standard 60-certified sodium hypochlorite solution is injected neat. It was noted during the inspection of this source, that HWC had improvised a shelter for the injection feeder consisting of two masonry blocks with a piece of wood over the top of it for shade. *However, the plastic solution tank was exposed to all elements and temperature extremes. Please provide photo documentation that the well site security and shelter for chlorination has been installed by March 2018.*

Sierra Lakes Well 7

The chlorination equipment at this source consists of a peristaltic pump and a 60-gallon plastic solution tank. The pump is rated to deliver at a maximum rate of 0.21 gph at 100 psi. The 12.5 percent ANSI-NSF Standard 60-certified sodium hypochlorite solution is injected neat. It was noted during the inspection of this source, that HWC had improvised a shelter for the injection feeder consisting of two masonry blocks with a piece of wood over the top of it for shade. *However, the plastic solution tank was exposed to all elements and temperature extremes. Please provide photo documentation that the well site security and shelter for chlorination has been installed by March 2018.*

Quail Meadows Pump House

The chlorination equipment at this location consists of a peristaltic pump and a 25-gallon plastic solution tank. The pump at this location is rated to deliver at a maximum rate of 1.5 gph at 150 psi. The 12.5 percent ANSI-NSF Standard 60-certified sodium hypochlorite solution is injected neat. Both the injection feeder and the solution tank are located within a secured building out of the direct elements. It should be noted that at this location each well has a production meter tied to it before combining into a single, common line where chlorine is injected and the water is delivered to the Quail Meadows storage tank.

2.3 ADEQUACY OF SUPPLY

Based on 2016 electronic Annual Report to the Drinking Water Program (eAR), the system produced a total of 161.07 million gallons (MG) in 2016. The maximum month water usage occurred during August when 22.47 MG was produced. This computes to an average day demand during the maximum month of approximately 724,740 gallons (503 gpm). The maximum day demand is calculated by taking the average day of the maximum month and multiplying it by a peaking factor of 1.5, which gives the estimated maximum day demand. The estimated maximum day demand (MDD) is approximately 755 gpm (0.73 gpm/service connection). This maximum day demand calculation is then multiplied by a peaking factor of 1.5 to determine an estimated peak hour demand. The estimated peak hour demand is 1,133 gpm (1.10 gpm/service connection). Currently, the active sources are producing about 1,109 gpm. By comparing these two figures for 2016, the peak hour demand is exceeding the combined source production by 22 gpm.

It is important to note that although the estimated peak hour demand is more than the current sources are producing, HWC voluntarily throttles some of their sources in an attempt to preserve and maintain their static and active pumping levels. Hillview has been very proactive with the monitoring of the well water levels and their lengths of pumping time of the water sources through their SCADA system. According to HWC, this practice appears to be working. Part of the strategy also entails trying not to pump each active source more than 12 hours in a

day. Sometimes, this may be exceeded, but the wells production is still reduced voluntarily by HWC.

2.4 STORAGE

At the time of report preparation, HWC had a total of 13 active storage tanks for the Oakhurst/Sierra Lakes water system. Some of the tanks identified in previous inspection reports have now been removed and some new tanks that are part of the OSL funding projects have replaced them. The tanks removed were Tanks 1A, 6, 6A, 7, 8, 8A and 10. The new tanks that have been installed or replaced existing tanks are Courtney #1, Courtney #2, Forest Ridge #1 and Forest Ridge #2. The tanks provide approximately 1.65 MG of storage for the system. All tanks feature a top inlet and bottom outlet configuration. HWC has 10 booster pump stations and 15 pressure zones. Three of the pressure zones are supplied water through hydropneumatic pressure tanks and the remainder are gravity fed. There are three storage tanks which are offline and are disconnected from the system. All sources pump to storage prior to being distributed to the distribution system. A summary of the active storage tanks is provided in Table 3:

Table 3
Hillview Water Company – OSL Storage

<i>Name</i>	<i>Volume (gallons)</i>	<i>Receives From:</i>	<i>Delivers To:</i>
Tank 1 (420 Reservoir)	420,000	Sierra Lakes Treatment Site, YHS Wells	Tanks 9 & 9A
Tank 2	25,000	Distribution System	Vista Heights & Oakhurst
Tank 3	25,000	Distribution System	Vista Heights & Oakhurst
Tank 4	25,000	Distribution System	Vista Heights & Oakhurst
Tank 9	25,000	420 Reservoir	Hillsborough Loop, Tanks 10 and 10A
Tank 9A	30,000	420 Reservoir	Hillsborough Loop, Tanks 10 and 10A
Tank 10A	18,300	Tanks 9 and 9A	Indian Springs
Courtney #1	90,000	Sierra Lakes WTP	Sierra Lakes Upper
Courtney #2	90,000	Sierra Lakes WTP	Sierra Lakes Upper
FR Tank #1	200,000	Forest Ridge WTP	Forest Ridge and Oakhurst
FR Tank #2	200,000	Forest Ridge WTP	Forest Ridge and Oakhurst
Quail Meadows Tank	230,000	Quail Meadows Chlorination	Quail Meadows
West Oak Tank	437,000	Junction Wells & Distribution System	West Oak
Total	1,815,300 gallons		

- Tank No. 10A – overflow drain lacking screen. NO CHANGE.
- Tank No. 4 – severe corrosion and rust near bottom of tank. NO CHANGE.
- Tank No. 4 – unpatched holes leaking water, NO CHANGE.
- West Oak Tank – overflow drain lacking screen. During the 2016 inspection the air release vent was pointing up. This must be down turned and screened.
- Vista Heights Pressure Zone – unsecured ladders, unsecure site. NO CHANGE.

- Indian Springs Hydro Zone – unsecured ladders, unsecure site. Since this location was not inspected, HWC responded that this site is behind an automatic gate where public entry is prohibited.

When questioned about these outstanding safety and security items since requested in 2013, the Manager stated that the safety security measures would be addressed as funds become available. Whether or not tank and ladder security will be addressed through the funding projects, the safety and security of the tanks must be addressed by completion of the funding projects. The current funding agreement deadline for the P84 project is March 31, 2018, and the P50 (Forest Ridge area) deadline is June 30, 2018.

For all the bulleted items in the OSL Storage Table, please provide photo documentation showing the corrections noted have been made. The corrections and photo documents must be provided by March 30, 2018.

For the existing storage tanks to remain and any newly constructed ones, please provide a schedule which includes the information on the storage tank, the last cleaning and inspection date (if applicable) and the date of the next cleaning and inspection by December 31, 2017. A typical frequency is at least once every five years. This information is also essential to include in any new or revised Operations Plans that will be required due to the water system treatment improvements.

Once the funding projects have been completed for the OSL water system, a permit will need to be issued. This will provide HWC with operating criteria and special monitoring provisions necessary as a result of the treatment techniques and facilities to remove arsenic, iron, manganese and uranium from the source waters

The Quail Meadows bolted steel tank is 45 feet in diameter and was installed as a new tank for the subdivision.

2.5 DISTRIBUTION SYSTEM

Booster Pump

The Company operates 10 booster pump stations which are summarized in Table 4:

Table 4
Summary of Booster Pumps

Name	Size of pump(s)	Delivers to
Sierra Lakes Treatment (Tanks Nos. 8 & 8A)	3-hp	420 Reservoir , Tank No. 1, Sierra Lakes Reservoir
Site 1 (Tanks Nos. 1 & 1A)	2 x 5-hp	Site 9 (Tanks 9 & 9A)
Vista Heights Tank Site (Tanks. Nos. 2, 3, & 4)	1.5-hp & 30-hp fire pump (activates at 50 psi)	Vista Heights & Distribution System
Forest Ridge Tank Site	1.5-hp & 10,000-gallon	Forest Ridge

(Tanks Nos. 6 & 6A)	hydropneumatic tank	&Distribution System
Site 9 (Tanks Nos. 9 & 9A)	2 x 5-hp	Hillsborough, Site 10 (Tanks Nos. 10 & 10A)
420 Reservoir	1.5-hp & 2 x 85-gallon bladder tanks	Sierra Lakes
Site 10 (Tanks Nos. 10 & 10A)	1-hp & 900-gallon hydropneumatic tank	Indian Springs & Distribution System
John West	1-hp & 85-gallon bladder tank	John West Road
Hidden Oaks	3-hp & 4 x 80-gallon bladder tanks	Hidden Oaks
Shilo	1-hp & 900-gallon hydropneumatic tank	Distribution System (north end of system)

The booster pump stations are equipped with flow meters. Meter readings are recorded three times per week.

As part of the improvements being completed through the Proposition 50/Proposition 84 funding projects, there will be dedicated transmission mains going to treatment facilities to address the rising iron, manganese, arsenic and uranium levels. This change in delivery design for the distribution system may result in fewer pressure zones which will need to be evaluated upon the funding projects completions. If the number of pressure zones is reduced, it will most likely impact the distribution system bacteriological monitoring and should be revisited at the time of permitting the new treatment facilities, storage facilities and any other changes as a result of the funding improvement projects.

Water Mains

The distribution system consists of four to twelve-inch diameter mains with most service laterals being ¾ -inch or 1-inch. The system piping is comprised of about 80 percent PVC, 10 percent ductile iron, 5 percent asbestos-cement (AC), and 5 percent steel. There is an unknown number of dead-ends in the system. Any repairs or replacement of water mains are completed with AWWA C-900 Class 150 PVC pipe.

System Flushing and Valve Exercising

According to the 2016 Annual Report to the Drinking Water Program, 592 valves ranging in size from 4 to 12-inches were identified as being in the water system. The report also discloses that there are 20 dead-ends in the water system. However, all of them are equipped with blowoff valves. Although the report goes on to disclose that the frequency of flushing is one to three times yearly and valves are exercised as needed, no dead-ends were flushed or any valves were exercised in 2016. This is very concerning, especially since HWC is closer to

having complete treatment installed, but due to lack of tank cleanings and flushing of water mains, it remains to be seen if the customers will notice positive visual changes in the water quality.

It continues to be emphasized with HWC that proper operation must include adequate maintenance of storage facilities and water distribution mains, which has been somewhat overlooked for years now. *These mains must be flushed prior to commissioning the new state funded water treatment facilities at Sierra Lakes and Forest Ridge. HWC must provide a plan and time schedule for these tasks by November 30, 2017. Flushing must then be a continuous, ongoing operational policy by the water system.*

System Repairs

Typical repair of water mains are done under pressure with "full circle" clamps. If the leak is large and cannot be repaired under pressure, the main is isolated with the water turned off in the localized area of repair. As long as the isolation valving is effective, the customers without water service are minimized. If there is a pressure drop in the affected water main below 5 psi due to the repairs, the repaired or replaced pipe is doused with a chlorine solution. When the system pressure is restored, the repair area is flushed and special bacteriological samples are collected. By regulation, any time a mains water pressure drops below 5 psi, special or investigative bacteriological samples are required to be collected. Hillview personnel follow AWWA standards when any repairs are made.

It is important to mention again here about the significance of having an established valve exercising program. The Division's experience is that water systems that do not have active valve exercising programs are more prone to isolate larger areas to conduct repairs of water mains. This impacts more customers, requiring more notification, more special sampling and potential complaints for unnecessarily being out of water.

2.6 OPERATION AND MAINTENANCE

The Oakhurst/Sierra Lakes is a community water system which is classified by the Division's operator certification requirements as a D3 system. This means that the system is required to have a chief distribution system operator with at least a D3 certification and all shift operators with at least D2 certifications. HWC's designated Chief Distribution System Operator is Roger Forrester (D3) and the shift operators are identified as: Josh Barker (D2), James Foster (D2), Steven Gerszewski (D2) and Jon Miller (D2).

It is important to note that one of the operators, Richard Ayala (D1) was designated on the 2016 Annual Report as a Distribution System Shift Operator. Technically, since his certification is two levels lower than the systems certification requirement, he cannot be a designated Distribution System Shift Operator doing certain tasks in the distribution system that are specifically defined in the regulations.

For treatment plant operator certification, the Oakhurst/Sierra Lakes system is classified as a T2 system. The system is required to have a Chief Treatment Plant Operator with at least a T2 certification and a shift operator with a T1 certification. Mr. Forrester possesses a T3 certification and is the designated Chief Treatment Plant Operator. The designated Treatment Plant Shift Operators are: Richard Ayala (T1), Josh Barker (T1), James Foster (T1), Steven Gerszewski (T2) and Jon Miller (T2). HWC meets the Division's treatment plant operator certification requirements.

The OSL wells are inspected Monday through Friday. During the daily visits the tank levels are checked, chlorine residuals are noted and action is taken if necessary. The pressure is noted at the pressure tanks and wells are checked for water production and hours of operation. The well sites are inspected for any signs of tampering or vandalism, as some do not have permanent security fencing around the wells, storage tanks and pressure tanks to prevent unauthorized access. The locations where there is security fencing are still checked for breaches and that unauthorized access or tampering has not taken place.

Cross-Connection Control Program

HWC has an existing cross-connection control program in place. The Division recommends that a cross-connection control survey at least once every five years. The Company last conducted an internal cross-connection control survey in April 2012. All backflow devices are required to be tested annually. According to the 2016 Annual Report to the Drinking Water Program, there are 205 backflow prevention devices in the water system. All 205 active devices were tested in 2016, with six devices failing, but were repaired or replaced. Copies of the testing records must be kept on file by HWC for a minimum of three years.

The 2012 survey found that of the 1025 service connections surveyed, there were 10 with auxiliary sources, 176 connections with other hazards and 186 connections with backflow prevention devices already installed. It is imperative that a system of this size continue to maintain and oversee new connections, existing connections and changes in ownership, as they all could warrant changes in backflow or cross connection concerns. Therefore, it is highly recommended that an independent, third party conduct the next cross-connection control survey, as they are recommended every five years (due April 2017). By having an independent, third party conduct the inspection, their expertise and certifications would add benefit to the survey. This training and certification would most likely be above and beyond any training or experience that Certified Distribution System Operator would receive. *Please provide a plan and time schedule for an independent, third party cross-connection control survey by November 30, 2017, as it has already been past the five year frequency recommended. After review of an independent survey, the Division can thereafter consider whether internal cross-connection control survey could be conducted or that they should still be conducted by a third party.*

Emergency Notification Plan (ENP)

The System has an Emergency Notification Plan (ENP) dated February 2, 2016, on file with the Division. This ENP is generally current, having the current Merced District Engineer listed and the current County Environmental Health Director, Dexter Marr.

A review of the actual notification plan by Hillview was also conducted. The plan identified that notification to customers by robocall can be generally notified within a half hour of the emergency as long as the emergency occurred during regular business hours. Additionally, customers are notified by social media outlets, such as Sierra News OnLine and the Sierra Star newspaper. Direct telephone contact and handbill distribution will typically be used early in the day to alert customers that may have not been listening to the radio or television. For notifications that must take place during non-business hours, the same media will be contacted with the notice and public announcements will be scheduled for as long as possible.

Discussions have already been ongoing regarding the use of robocalls. It has been determined that although the robocalls are very efficient for rapid notification, unless a

customer has signed up for this service, it will not notify them. The other concerns were if someone does not answer the robocall or that it goes to a voicemail or answering machine. The programming for the robocall will at least notify HWC staff that when a number was called, it was answered and acknowledged, a voicemail or message was left or the phone (number) was unanswered. Therefore, this would not be the preferred method, since the intent for notification is for all customers, not a select or registered few. The robocall is still acceptable as a secondary notification method, since this should limit manpower, staffing and time to notify customers, rather than hand delivering notification messages to each customer.

Consumer Confidence Report (CCR)

Each year, Hillview Water Company is required to prepare a CCR and distribute it to the customers of the water system by July 1st of each year. Within three months of distributing the CCR, the water system must submit a certification form and a copy of the CCR to the Division. The System submitted a copy of the 2016 CCR along with the certification for to the Division on April 3, 2017. Hillview also uploaded the CCR to the Division's website and it is posted on their own website. In reviewing the CCR, it met all the requirements for mandatory language and reporting including the Health Effects Language on MCL exceedances identified in the CCR. For the 2016 CCR, Hillview provided a letter to all their customers giving a brief description of the system's detections for the past year and referenced a website location to view the CCR. The letter also gave customers an option to have a hardcopy mailed to them.

Drought Preparedness Plan

According to the 2016 electronic Annual Report to the Drinking Water Program (e-AR), a Drought Preparedness Plan was revised August 29, 2016. This section in the e-AR disclosed that the system did not experience drought conditions significant enough for OSL to activate any emergency standby wells. This section also stated that HWC did not project water shortages in current calendar year, did not need to implement new water conservation measures or mandatory rationing and that the pumping water levels of the OSL sources are remaining steady.

2.7 SOURCE WATER QUALITY MONITORING

General Mineral, General Physical and Inorganic Chemicals

Except nitrate and asbestos, general mineral, general physical and inorganic chemical monitoring is required to be completed once every 36 months for all active wells. Please reference Appendix A for the complete Water Quality Monitoring Schedule required for Title 22 compliance monitoring of groundwater sources for OSL.

Upon review of the outstanding source monitoring during the preparation of this report, quite a few of the water sources had past due requirements. HWC was contacted after reviewing the correspondence file and there were three or four sources that had been down for repairs which could have falsely impacted this past due monitoring. This was discussed with Hillview and apparently some of this subject monitoring that was necessary to be tested was not noted on the chain of custody form. Hillview is aware of this and is diligently working with their laboratory now to set up this delinquent sampling.

The review then turned to the three new Quail Meadows sources which received approval to operate September 8, 2014. The email approval noted that the sources must continue to be monitored under the new well monitoring requirements schedule that had been previously provided prior to approval of these additional water sources.

Although some initial (new well) monitoring requirements have been satisfied, such as hexavalent chromium, the perchlorate monitoring had not (two samples initially required to be collected five to seven months apart. Once it appeared that HWC had not completed the initial monitoring requirements, the results in the State database from 2013 to present were provided to HWC to evaluate and compare what source monitoring has been completed in comparison to the new well monitoring requirements. Any missing or delinquent monitoring that was found, HWC will be working with their laboratory to get them corrected.

As would probably be expected since the funding projects mentioned earlier in this report are to address MCL exceedances, a majority of the OSL wells have MCL exceedances for iron and/or manganese. However, these are secondary standards, but some of the OSL wells also have MCL exceedances for arsenic too. Fortunately, the Proposition 50 and Proposition 84 projects under way include treatment to reduce the levels to below the MCL's for these constituents.

Nitrate

All water systems are required by the Division to conduct annual nitrate monitoring of their active sources. Formerly, the Division required all nitrate monitoring data be reported to the Division at NO_3 with an MCL of 45 mg/L. On January 1, 2016, the Division changed this requirement to require all water systems and laboratories to report nitrate results as N with a MCL of 10 mg/L. The Division no longer accepts nitrate monitoring results to be reported as NO_3 . Unlike another HWC system, the most recent results from the active OSL sources does not have any nitrate MCL exceedances in their active sources. This system has not had a historical problem with nitrate in their currently active sources either.

Nitrite

All water systems are required by the Division to conduct triennial nitrite monitoring of their active sources. All active wells were last monitored for nitrite in May 2014, September 2015, December 2016, March 2017 or May 2017, with most of the results reported as non-detect, however, a select few had detections, but the highest level was less than 2.5 mg/L. All active wells are next due for nitrite monitoring three years from the last sampling date.

Hexavalent Chromium

As part of the newly adopted State regulation, all community and nontransient-noncommunity water systems were required to perform initial monitoring on all existing active sources for hexavalent chromium before January 1, 2015. The current State MCL for hexavalent chromium is 10 $\mu\text{g/L}$. Hexavalent chromium monitoring results less than two years old may be used to satisfy initial monitoring requirements as long as it was performed by an approved analytical method by a laboratory certified by California's Environmental Laboratory Accreditation Program. Total chromium cannot be used for initial monitoring requirements. Hillview monitored the active wells for hexavalent chromium in October or November 2014. The source monitoring results were non-detect.

OSL has completed and met the initial monitoring requirements for hexavalent chromium. Since initial monitoring has been completed for hexavalent chromium and the levels are below the hexavalent chromium MCL, community and nontransient-noncommunity water systems are required to monitor for total chromium once every three years.

On July 1, 2014, the Division adopted a California MCL of 0.010 mg/L for hexavalent chromium. As a community water system, OSL was required to comply with the new MCL. The regulation required that OSL initiate monitoring for hexavalent chromium within six months of the adoption date. In October and November 2014, OSL conducted hexavalent chromium sampling of their active sources and the results were reported as ND. Since these active sources were less than the MCL for hexavalent chromium, total chromium (included in the inorganic chemicals) can be used in lieu of hexavalent chromium analysis on subsequent routine monitoring of once every three years. The next total chromium samples for the active OSL sources will be due in 2018, 2019 or 2020, depending on the sources previous sampling date. At the time of the review, one source, Ditton Well #4 was past due and HWC was notified about this.

On May 31, 2017, the Superior Court of Sacramento County issued a judgement for the Division to invalidate the California MCL of 0.010 mg/L for hexavalent chromium in drinking water, ordered the Division to prove that it took necessary actions to delete the MCL from the California Code of Regulations and ordered the Division to adopt a new MCL for hexavalent chromium. In response, the Division will not appeal the court's decision. The Division will take the necessary steps to delete the text of the regulations pertaining to establishing and implementing the MCL for hexavalent chromium and begin the work of establishing a new MCL for hexavalent chromium.

At this time, OSL is not affected by the change in hexavalent chromium MCL. However, the MCL for total chromium of 50 µg/L will remain in place. OSL is still required to monitor their active groundwater sources for total chromium once every three years.

Organic Chemicals

OSL must monitor the active wells for volatile organic chemicals (VOCs) once every 72 months and synthetic organic chemicals (SOCs) once every 108 months as shown on the Water Quality Monitoring Schedule (Appendix A).

Realizing the database had some delinquencies, a more in depth review revealed that some of the newer sources brought on line by OSL, had not completed the initial monitoring requirements and that the scheduler still had new well monitoring frequencies tied to some of the sources. In particular, Sierra Lakes Wells Nos. 5 through 9. For these sources, VOC monitoring was conducted in 2007, 2012 and 2016. SOC monitoring was only conducted in 2007 and 2012. For the Quail Meadows Wells Nos. 2 through 4, VOC monitoring was conducted in 2013 and 2016. SOC monitoring was only conducted in 2013. New well requirements for VOC and SOC constituents requires initial monitoring of sources annually for three years. Unless there are results that have not been electronically data transferred (or EDT) by the HWC lab, then this delinquent monitoring must be addressed and brought current. Then these sources can go to the standard monitoring frequencies thereafter (unless any sample has a detection in the source water). Currently, the water produced by the OSL sources do not have detectable concentrations of any of the Title 22 applicable VOCs or SOCs that HWC is required to monitor for.

Table 5

Last VOC and SOC Monitoring

Source	Last VOC Monitoring	Next VOC Monitoring	Last SOC Monitoring	Next SOC Monitoring
Ditton Well No. 1	9/2016	9/2022	11/2011	11/2020
Ditton Well No. 2	9/2016	9/2022	11/2011	11/2020
Ditton Well No. 3	9/2016	9/2022	11/2011	11/2020
Ditton Well No. 4	9/2010	DUE NOW	11/2011	11/2020
Sierra Lakes Well 1A	9/2016	9/2022	11/2011	11/2020
Sierra Lakes Well 3	9/2016	9/2022	11/2011	11/2020
Sierra Lakes Well 4	12/2016	12/2022	11/2011	11/2020
Sierra Lakes Well 5*	12/2016	12/2022	11/2012	11/2021
Sierra Lakes Well 6*	12/2016	12/2022	9/2012	9/2021
Sierra Lakes Well 7*	9/2016	9/2022	9/2012	9/2021
Sierra Lakes Well 8*	12/2016	12/2022	9/2012	9/2021
Sierra Lakes Well 9*	12/2016	12/2022	9/2012	9/2021
Junction Well 2	7/2017	7/2023	1/2011	1/2020
Quail Meadows Well 2*	8/2017	8/2023	8/2017	8/2026
Quail Meadows Well 3*	8/2017	8/2023	8/2017	8/2026
Quail Meadows Well 4*	8/2017	8/2023	8/2017	8/2026

It is also important to note that this table of monitoring due is based on the standard monitoring schedule. The OSL water system does have some relatively new sources, such as the newer Sierra Lakes and the Quail Meadows sources (asterisked - *) of which may require some of the new well initial monitoring requirements still. This new source monitoring (schedule) must be utilized for the pending Forest Ridge sources too. Please reference Appendix B, for new source monitoring requirements.

1, 2, 3-Trichloropropane

It is important for water systems to note that a MCL has now been adopted by the State. This will be requiring water systems to collect samples for this constituent or grandfather existing data from source samples previously collected and tested. Currently, the regulation requires water systems to select source by source what is to be grandfathered or what is to be collected from their sources. Future information on this new regulation will be provided to water systems when sample collect and/or grandfathering of data is to begin.

Radiological

The California Radionuclide Rule became effective on June 11, 2006. Initial monitoring requirements under the California Radionuclide Rule must have been satisfied by December 31, 2007, for existing sources. Subsequent gross alpha monitoring frequencies for each active source are based on the previous results. If the gross alpha result is over 5 or 15 pCi/L, this triggers additional radiological monitoring. Reference the Water Quality Monitoring Schedule (Appendix A). The initial radiological monitoring requirements have been satisfied for the existing OSL water sources and sources that been brought on line within the last five or so years.

A review of the historical radiological results revealed that OSL has completed the initial radiological monitoring requirements for each of the new sources to be activated within the last five or so years. This does not mean that future monitoring could trigger additional constituents to be tested, such as when the gross alpha result exceeds 5 pCi/L. If the gross alpha does exceed 5 pCi/L, then HWC must have this source tested for uranium also.

Table 6
Radiological Monitoring

Source	Last Sample Date	Last Gross Alpha Result, (PCi/L)	Last Uranium Result/Date, (PCi/L)	Gross Alpha Sampling Frequency	Next Sample Due
Ditton Well No. 1	3/2014	7.73**	1.4 (8/1/2017)	36 months	PAST DUE
Ditton Well No. 2	3/2014	6.62**	2.9 (9/25/2007)	72 months	3/2020
Ditton Well No. 3	3/2014	ND	2.8 (9/25/2007)	108 months	3/2023
Ditton Well No. 4	3/2014	9.93**	0.8 (1/18/2008)	36 months	PAST DUE
Sierra Lakes Well 1A	8/2017	8.06**	2.7 (5/9/2013)	36 months	8/2020
Sierra Lakes Well 3	10/2014	8.28**	6.9 (5/9/2013)	36 months	DUE NOW
Sierra Lakes Well 4	10/2014	35.90**	3.1 (4/11/2017)	quarterly???	DUE NOW
Sierra Lakes Well 5	3/2015	142.00**	47.0* (4/22/2013)	quarterly???	3/2018??
Sierra Lakes Well 6	3/2015	32.70**	20.0* (5/9/2013)	36 months or quarterly???	3/2018??
Sierra Lakes Well 7	3/2015	236.00**	200.0* (7/11/2017)	quarterly???	3/2018??
Sierra Lakes Well 8	3/2015	80.70**	56.0* (4/22/2013)	quarterly???	3/2018??
Sierra Lakes Well 9	8/2017	102**	10 (4/2013)	quarterly???	8/2020??
Junction Well 2	3/2014	9.93**	19.3 (1/24/2008)	36 months	PAST DUE
Quail Meadows Well 2	8/2017	5.54**	5.9 (12/17/2013)	72 months	8/2023
Quail Meadows Well 3	8/2017	4.03	3.6 (12/17/2017)	72 months	8/2023
Quail Meadows Well 4	8/2017	3.52	3.4 (12/17/2017)	72 months	8/2023

NOTES:

Any bolded figure indicates result over the MCL (gross alpha, 15 pCi/L; uranium 20 pCi/L).

(*) Any single sample over the uranium MCL is required to be monitored quarterly for at least one year. Please reference water quality monitoring schedule

(**) Indicates that the source exceeded 5.0 pCi/L gross alpha thus requiring uranium or radium-226 analysis to obtain uranium level. If the gross alpha minus uranium level exceeds 15 pCi/L, then quarterly monitoring of the source must begin too. Please reference water quality monitoring schedule.

Source Bacteriological Monitoring

Because Hillview provides continuous chlorination of the water produced by the wells, source monitoring for bacteriological contamination is required. Monthly samples are collected from the active sources and tested by a method providing the density count of the coliform bacteria.

Based on the submittal of the California Ground Water Rule template, the OSL system will sample each active source for coliform bacteria if total coliform is present in a routine bacteriological distribution system sample.

Since the last inspection report in 2013, there have been a few positive source coliform results. The sources with positive results since 2013 include: Quail Meadows #4 (2), Quail Meadows #3 (1), Sierra Lakes #4 (4), Ditton #2 (1), Sierra Lakes #6 (2), Junction Well #1 (1), Sierra Lakes #1A (1), Ditton #1 (1) and Sierra Lakes #5 (1).

The number of positive *E. coli* results were even fewer since 2013. There were only two *E. coli* results of which one occurred at Quail Meadows Well 4 on March 8, 2016, and the result was greater than 23. The other positive occurred at Sierra Lakes #5 on June 21, 2017, and the result was 1.1.

2.8 DISTRIBUTION SYSTEM MONITORING

Bacteriological Water Quality

Based on the number of service connections (1,032), pressure zones (15) and the population served (3,818), OSL is required to collect and analyze a minimum of four bacteriological samples per month from within the distribution system. However, this quantity is based on the population and number of service connections. However, since the number pressure zones exceeds this figure for monitoring samples necessary, the OSL system is required to sample 15 locations monthly based on the number of pressure zones in their approved bacteriological sample siting plan or BSSP. It is important that each zone be monitored for bacteriological quality monthly, as this testing is the best indicator of immediate potential water quality issues that could impact public health.

The Bacteriological Sample Siting Plan (BSSP) on file for the System is dated August 17, 2016. The current BSSP on file lists 17 routine sample sites with the repeat sampling site locations for the original sampling locations. Because the system samples at more than one location routinely, Hillview is not required to collect five routine samples in the next month following a positive result in the distribution system (from the previous month). 15 of the 17 sites are sampled every other week, while two of the locations are sampled monthly. The recently approved plan also included a map indicating OSL's pressure zones and system boundaries.

A review of the distribution system bacteriological results dating back to 2013 revealed that there were only two total coliform positive results for the distribution system, with no fecal or *E. coli* positive results. The instances occurred August 2015 and March 2017. Proper repeat sampling was conducted and all of the repeat sample results were absent of any coliform bacteria.

California Ground Water Rule Triggered Source Monitoring

As per the requirements of the California Groundwater Rule (GWR), public water systems are required to conduct triggered source monitoring whenever a routine distribution system sample is positive for total coliform bacteria. Hillview must ensure that the active wells will be sampled for total coliform bacteria and *E. coli* bacteria when a routine distribution system sample shows the presence of total coliform bacteria.

Hillview completed the triggered monitoring form indicating that in the event of a distribution system positive result, the system will collect bacteriological samples from each active well.

Stage 2 – Disinfection By-Product Rule Monitoring (ST2 DBPR)

Hillview has been collecting the ST2 DBPR sample annually since required by the program in June 2014. The last annual ST2 DBPR sample was collected June 27, 2017, therefore the next due date for ST2 DBPR monitoring is June 27, 2018.

The current location for the ST2 DBPR monitoring is designated as the 420 Reservoir, 2010007-900. This source code is used specifically for electronic data transfer (EDT) of DBP results into the state database. However, this location is similar to both the Hillview Coarsegold Highlands and Raymond sites questioned as being the best sampling site for longest residency time to form DBP's. The General Managers reasoning was that the tank site was selected since this one and some other OSL tanks will contain chlorinated water that may not go into the distribution system for a while. But due to the relatively small system size and number of connections, water can flow in the distribution system, even if a minimal quantity to form DBP's. And, due to multiple pressure zones, water can stay in the storage tanks for extended times if system demands warrant. After this discussion, the existing DBP sampling location for OSL remained the same and was not relocated.

Table 7

Primary Station Code	Stage 2 DBP Monitoring Location	Justification
2010007-900	ST2DBP – 420 Reservoir	Location of maximum residence time in the distribution system.

Lead and Copper Tap Monitoring

A review of OSL's lead and copper tap monitoring history reveals that there have been no exceedances in the lead or copper action levels (0.015 mg/L and 1.3 mg/L respectively) monitored in the distribution system. The OSL system has been monitoring for lead and

copper tap since instigation in 1993. The following table summarizes the lead and copper tap monitoring results for the Hillview OSL water system:

Table 8
Lead and Copper Tap Monitoring History

Sample Date	Sample Interval	No. Required	No. Sampled	Lead 90 th Percentile (mg/L)	Copper 90 th Percentile (mg/L)
9/28/2004	1 st Triennial	10	10	0.005	0.260
10/31/2007	2 nd Triennial	10	10	ND	0.117
9/9/2010	3 rd Triennial	10	10	ND	0.210
9/25/2013	4 th Triennial	10	10	ND	0.210
7/19/2016	5 th Triennial	10	10	0.010	0.230
	6 th Triennial	Due between June 1 and September 30, 2019			

As noted in the table above, the next round of lead and copper tap monitoring (10 samples) must be completed in 2019 between June 1st and September 30th. Please note that the previously approved, same lead and copper tap sampling locations must be used in each round of LCR monitoring that have been previously approved. All participants must be notified of their individual tap sampling results and the results provided to the Division using Form 141 AR.

Because the lead and copper tap sampling has become more prevalent in the public eye since the Flint, Michigan incident, the Division has made recommendations to help the water system customers to be better informed by making the following available to the public:

- The latest 90th percentile values for the most recent round of LCR tap sampling; and
- The number of sites sampled, the number of sites that exceeded an action level, and the number of samples that were invalidated (if applicable); and
- Justifications for invalidation of LCR samples (if applicable); and
- Information on the locations of lead service lines in the distribution system, together with a map of the identified areas and an inventory of lead plumbing in the system; and
- Additional health information on how to minimize lead in drinking water if lead was detected above the action level in more than 5%, and up to and including 10%, of sites sampled. The health information language specified in Section 64482(c), Chapter 15, Title 22 of the Consumer Confidence Report regulations may be used for this purpose.

Although the future treatment for removal of iron, manganese, arsenic and uranium potentially have pretreatment requirements that may alter the chemistry of the OSL water, neither of the treatments approved and pilot study tested will be directly altering the pH of the water

Lead Service Line Inventory

It is important to note for HWC that a recent regulation requires community water systems to compile an inventory of known lead user service lines in use in its distribution system. Also, the regulation requires the Public Water System (PWS) to identify areas that may have lead user service lines in use, or identify any areas within the PWS distribution system that the PWS cannot identify what material is being used for the service line.

If the PWS completed inventory does not include any lead service lines and also does not contain any unknown material service lines, the PWS must submit a letter to the regulatory agency, Division of Drinking Water (DDW) or the Local Primacy Agency (LPA), stating the inventory was completed and with the results. A template letter is located on the Division's website. *Currently, this is required to be completed by July 1, 2018.*

Asbestos Monitoring

The distribution system piping for OSL contains relatively little asbestos-cement (AC) pipe (disclosed earlier as approximately 5% of the distribution system). Therefore, the potential is low for the distribution system to be a source of asbestos, regardless of the aggressiveness of the source water. At this time, only source water asbestos monitoring will be required and does not warrant establishing a code for dedicated distribution system asbestos monitoring.

III. SYSTEM APPRAISAL

The Hillview OSL water system is currently in fair overall condition and is capable of supplying safe and potable water, which upon the funding project completions will meet all of the applicable primary drinking water standards. This system evaluation will be more formally improved upon completion of the Proposition 50 and 84 funding projects which includes installation and/or modification of distribution mains for dedicated raw water flows to replacement treatment facilities, additional treatment installed to remove arsenic that has been impacted by the MCL reduction and the uranium treatment to reduce radiological levels to below their respective MCL's in the distribution system. OSL also has elevated levels of iron and manganese, which will benefit from the arsenic treatment being added by removing these constituents from the proposed treatment facilities also. OSL is currently providing quarterly public notifications for arsenic and uranium to customers until the treated water levels in the distribution system are at levels below the MCL's for the constituents being treated.

HWC is also required by their Compliance Orders to provide progress reports to the Division with updates on the status and progress of the funding projects. The most recent update has the OSL water system completing the projects and coming back into compliance for water quality by March 2018.

Hillview must address the following issues that were noted during the inspection and subsequent file review:

1. Only the sources on Page 2, Table 1 are the only permitted, active wells that are approved for use. No other sources shall be used without prior written approval from the Division. OSL must immediately notify the Division of any changes in the operating status of any well.
2. Forest Ridge Wells Nos. 5, 6 and 7 were provided with Primary Station or PS Codes, but are still lacking any approvals to operate or permit or at this time. These wells must be formally approved to operate and permitted.
3. Highland View Wells Nos. 1 and 2, Pierce Lake Well 1 and Yosemite High School Wells Nos. 2 and 3 are classified as inactive sources. Inactive sources must be locked out, physically disconnected, or otherwise isolated so that only an intentional act by the operator and no automatic response can place the source into service. Inactive sources can be upgraded to standby if all monitoring is updated to meet standby requirements and the change in status is approved in writing by the Division. Inactive sources can only be used

as a last resort in extreme emergencies after all other active sources of supply have been utilized. Any use of an inactive source is subject to the following restrictions:

- a. Emergency notification to the consumers that the water is unsafe for domestic use must be given immediately preceding, and on a continuing basis, during the duration of the emergency use of the source.
 - b. Initiation of the use of an inactive source must be the result of an intentional manual action by the systems operator.
 - c. The use of an inactive source shall not be initiated without the knowledge and approval of the Division.
 - d. All monitoring deemed as appropriate by the Division shall be required during or immediately following an emergency use of an inactive source.
4. All sources currently classified as inactive must have a plan and time schedule provided for the future of the sources since they all have been classified as inactive for some time now. Until these well locations are reactivated or destroyed, HWC must visit each location at least quarterly to ensure that the current sanitary conditions of the sources are adequate. Site visits should be more frequent if these locations have not been secured with locked fencing or other deterrents to minimize the potential for unauthorized access or tampering. Please provide a plan and time schedule for the future of these wells by December 31, 2017. If they are not going to be used, these sources must be properly destroyed by June 30, 2018.
5. The 2013 inspection report noted that the Ditton Well 2 casing was in poor condition. The Division recommends that HWC replace the top portion (above grade) of the casing the next time the pump is pulled. It did not appear that this has been replaced and the condition has not changed. However, there were no visible holes or leaks noted during the 2016 inspection. This recommendation and repair of the well pad must be addressed the next time that this pump is removed for repairs.
6. At the Ditton Well 3 location it was observed that the electrical box connected to the well casing had an exposed hole. This was covered or plugged with a sample jar. This was discussed with HWC and is not sufficient to prevent potential contamination from entering the well casing. HWC was directed in the field to provide a permanent plug. If this has not been addressed yet, this must be repaired by December 31, 2017. Please also provide photo documentation to note the repairs made.
7. Please address the sounding tube gap at Sierra Lakes Well 1A and ensure that there are no entrances for potential contamination to this or any water source. Please address this and provide photo documentation by December 31, 2017.
8. It was noted to HWC during the inspection that a portion of the Sierra Lakes Well 3 surface seal appeared to be undermined and a void between the well seal base and ground surface was noted. This presents a concern for contaminants to enter the well through this breach. It will be required for this well base to be repaired or the surface seal replaced. Photo documentation of the repair must be provided by December 31, 2017.
9. It should be noted that Sierra Lakes Well 4 is not on level ground and uphill of the surface seal has some soil that has eroded onto it. On the downhill side, some of the surface seal appears to be undermined and eroded away, exposing the bottom of the surface seal. This was brought to the attention of HWC during the inspection to fix or reroute drainage to

minimize potential contamination of the source and eroding of the well surface seal. It will be required for this well base to be repaired and/or replaced. Photo documentation of the repairs must be provided by December 31, 2017.

10. A minor drip was noted on the sample tap at Sierra Lakes Well 5 during the inspection and HWC was directed to fix this in the field. If this has not been addressed yet, please fix this leak by December 31, 2017.
11. During the inspection it was observed that erosion has placed soil over some of the Sierra Lakes Well 7 surface seal. HWC should attempt to direct any surface water drainage away from their well sites. It will be required for this well base to be repaired and/or replaced. Photo documentation of the repair must be provided by December 31, 2017.
12. The hole in the well building at Quail Meadows Well 2 is quite a bit larger than the pipe penetrated and could be an unwanted entrance point for rodents or other undesirables to the well house. This was brought to the attention of HWC for correction. It was also noted that during the inspection and brought to the attention of HWC, the flushing pipe for the well's alternate discharge was not screened. If these items have not been corrected yet, then they need to be addressed by December 31, 2017.
13. Holes were noted in the building housing Quail Meadows Wells 3 and 4. If the holes are not filled or pipes penetrating the area, the holes could be an unwanted entrance point for rodents or tampering to the well house. An unscreened flushing or discharge pipe was noted as not being screened. These were brought to the attention of HWC for corrections. If they have not been corrected yet, then HWC needs to address this by December 31, 2017, and provide photo documentation of the repairs.
14. Please provide a written description and time schedule of how Hillview will address their remaining well site security requirements with a permanent solution by December 31, 2017. The Division requires that all sites have adequate security to prevent tampering and vandalism of their sources of supply.
15. Most chlorination solution tanks and feeder equipment in the OSL water system are uncovered and exposed to the elements. The chlorine solution tanks are vulnerable to UV penetration and degradation, extreme temperatures and exposure in the summer months. Hillview must keep the chlorination solution and equipment sheltered to prevent degradation of the solution and formation of undesirable disinfection by-products due to high temperatures and sunlight. The chlorination equipment must be either relocated to a secured building or shaded and sheltered in a secured area to prevent chlorate ion formation, chlorine strength degradation and unwanted access or tampering. This is to be completed by March 30, 2018, and photo documentation provided of the improvements for each active chlorination site.
16. For all the bulleted items in the OSL Storage Table (Table 3), please provide photo documentation showing the corrections noted have been made. The corrections and photo documents must be provided by March 30, 2018.
 - a. Tank No. 10A – overflow drain lacking screen.
 - b. Tank No. 4 – severe corrosion and rust near bottom of tank and unpatched holes leaking water.
 - c. West Oak Tank – overflow drain lacking screen, air release vent facing up. Must be screened and turned downwards.
 - d. Vista Heights Pressure Zone – unsecured ladders and unsecured site.

- e. Indian Springs Hydro Zone – unsecured ladders, unsecured site.
17. For the existing storage tanks to remain and any newly constructed ones, please provide a schedule which includes the information on the storage tank, the last cleaning and inspection date (if applicable) and the date of the next cleaning and inspection by December 31, 2017. A typical frequency is at least once every five years. This information is also essential to include in any new or revised Operations Plans that will be required due to the water system treatment improvements.
 18. The OSL water mains must be flushed prior to commissioning the new state funded water treatment facilities at Sierra Lakes and Forest Ridge. HWC must provide a plan and time schedule for these tasks by November 30, 2017. Flushing must then be a continuous, ongoing operational policy by the water system with a plan and time schedule identified in the Operations Plans.
 19. OSL must test all backflow prevention assemblies each year. Hillview must have a third party conduct a cross-connection control survey for possible problems in the water system. This is to be conducted every five years and internal self-checks by Hillview can be completed during the other four years including cross-connection customer surveys. Although Hillview can continue with their staff making observations for cross-connection concerns, it is highly recommended that an outside, third party cross-connection control specialist conduct a survey every five years. Please provide a plan and time schedule for an independent, third party cross-connection control survey by November 30, 2017, as it has already been past the five year frequency recommended. After review of an independent survey, the Division can thereafter consider whether internal cross-connection control survey could be conducted or that they should still be conducted by a third party.
 20. It is important to note that one of the operators, Richard Ayala (D1) was designated on the 2016 Annual Report as a Distribution System Shift Operator. Technically, since his certification is two levels lower than the systems certification requirement, he cannot be a designated Distribution System Shift Operator doing certain tasks in the distribution system that are specifically defined in the regulations.
 21. Quite a few of the OSL's sources are still unsecured as was described in this inspection report. Please provide a written description and time schedule of how Hillview will address the well site security requirements with a permanent solution by December 31, 2017. The Division requires that all sites have adequate security to prevent tampering and vandalism of their sources of supply.
 22. Another request has been for Hillview to create and implement a valve exercising plan. To date, this has not been formally established in an Operations Plan. Hillview must develop a routine valve exercising program to insure that all valves are in proper working order on an annual frequency. Please provide a plan and time schedule for valve exercising by December 31, 2017.
 23. OSL must conduct their sixth round of triennial lead and copper tap monitoring between June 1 and September 30, 2019. The report is to be submitted using Form 141-AR.

Appendices

Appendix A: Water Quality Monitoring Schedule (CMGD)

Appendix B: Water Quality Monitoring Schedule, New Source (NCSGD)

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WATER QUALITY MONITORING SCHEDULE
Community System, >150 conn., <3300 population, groundwater near development (CMGD)
UPDATED - September 2015

Chemical - Title 22	MCL (mg/L)	EPA Method	Frequency (1)
Primary Inorganics - Section 64432			
Aluminum	1		Every 3 years
Antimony	0.006		Every 3 years
Arsenic	0.010		Every 3 years
Barium	1		Every 3 years
Beryllium	0.004		Every 3 years
Cadmium	0.005		Every 3 years
Chromium (Total Chromium)	0.05		Every 3 years (2)
Hexavalent Chromium (Chrome 6)	0.010	218.6 or 218.7	1 sample (2)(3)
Cyanide	0.15		Waived
Fluoride	2.0		Every 3 years
Mercury	0.002		Every 3 years
Nickel	0.1		Every 3 years
Perchlorate	0.006		Every 3 years (4)
Selenium	0.05		Every 3 years
Thallium	0.002		Every 3 years
Asbestos - Section 64432.2			
Asbestos - Source Water	7 MFL		Every 9 years
Asbestos - Distribution System sampling if Asbestos-Cement pipe used	7 MFL		Every 9 years if Aggressive Index ≤ 11.5
Nitrate/Nitrite - Section 64432.1			
Nitrate (as N)	10		Annually if ≤ 5 mg/L (5)
Nitrite (as nitrogen)	1		Every 3 years if ≤ 0.5 mg/L (6)
Nitrate + Nitrite (sum as nitrogen)	10		N/A
Secondary Standards - Table 64449-A			
Aluminum	0.2		Every 3 years
Color	15		Every 3 years
Copper	1.0		Every 3 years
Foaming Agents	0.5		Every 3 years
Iron	0.3		Every 3 years
Manganese	0.05		Every 3 years
Methyl-tert-butyl ether (MTBE)	0.005	502.2, 524.2	See MTBE frequency on page 2
Odor	3		Every 3 years
Silver	0.1		Every 3 years
Thiobencarb	0.001		Waived
Turbidity	5		Every 3 years
Zinc	5		Every 3 years
General Minerals - Section 64449			
Bicarbonate	N/A		Every 3 years
Carbonate	N/A		Every 3 years
Hydroxide Alkalinity	N/A		Every 3 years
Calcium	N/A		Every 3 years
Magnesium	N/A		Every 3 years
Sodium	N/A		Every 3 years
Hardness	N/A		Every 3 years
pH	N/A		Every 3 years
Secondary Standards - Table 64449-B			
TDS	500-1000;1500		Every 3 years
Specific Conductance	900-1600; 2200		Every 3 years
Chloride	250-500;600		Every 3 years
Sulfate	250-500;600		Every 3 years

MCL = Maximum Contaminant Level

Contact your district office with any questions.

- (1) Sampling shall be increased to quarterly following any result > MCL.
- (2) After initial hexavalent chromium monitoring, total chromium may be used if total chromium results are < 0.010 mg/L.
If total chromium result is ≥ 0.010 mg/L, monitoring for hexavalent chromium will be required.
- (3) Hexavalent chromium shall be increased to quarterly sampling following any result > 0.010 mg/L.
- (4) Perchlorate: This frequency applies if there were no detections in the initial monitoring.
- (5) Nitrate (as N) replaces Nitrate (as NO₃). Nitrate (as N) sampling shall increase to quarterly following any result ≥ 5 mg/L.
Upon request, this may be reduced to an annual frequency after 4 quarters of monitoring. Beginning with Jan. 1, 2016, water systems shall comply with the Nitrate (as N) requirement.
- (6) Nitrite sampling shall be increased to quarterly following any result ≥ 0.5 mg/L. Upon request, this may be reduced to an annual frequency after 4 quarters of monitoring.

WATER QUALITY MONITORING SCHEDULE
Community System, >150 conn., <3300 population, groundwater near development (CMGD)
UPDATED - September 2015

Chemical - Title 22	MCL (mg/L)	EPA Method	Frequency (1)
VOCs - Table 64444-A (a)			
Benzene	0.001	502.2, 524.2	Every 6 years
Carbon Tetrachloride	0.0005	502.2, 524.2	Every 6 years
1,2-Dichlorobenzene	0.6	502.2, 524.2	Every 6 years
1,4-Dichlorobenzene	0.005	502.2, 524.2	Every 6 years
1,1-Dichloroethane	0.005	502.2, 524.2	Every 6 years
1,2-Dichloroethane	0.0005	502.2, 524.2	Every 6 years
1,1-Dichloroethylene	0.006	502.2, 524.2	Every 6 years
cis-1,2-Dichloroethylene	0.006	502.2, 524.2	Every 6 years
trans-1,2-Dichloroethylene	0.01	502.2, 524.2	Every 6 years
Dichloromethane	0.005	502.2, 524.2	Every 6 years
1,2-Dichloropropane	0.005	502.2, 524.2	Every 6 years
1,3-Dichloropropane	0.0005	502.2, 524.2	Every 6 years
Ethylbenzene	0.3	502.2, 524.2	Every 6 years
Methyl-tert-butyl ether (MTBE)	0.013	502.2, 524.2	Every 6 years
Monochlorobenzene	0.07	502.2, 524.2	Every 6 years
Styrene	0.1	502.2, 524.2	Every 6 years
1,1,2,2-Tetrachloroethane	0.001	502.2, 524.2	Every 6 years
Tetrachloroethylene (PCE)	0.005	502.2, 524.2	Every 6 years
Toluene	0.15	502.2, 524.2	Every 6 years
1,2,4-Trichlorobenzene	0.005	502.2, 524.2	Every 6 years
1,1,1-Trichloroethane	0.200	502.2, 524.2	Every 6 years
1,1,2-Trichloroethane	0.005	502.2, 524.2	Every 6 years
Trichloroethylene (TCE)	0.005	502.2, 524.2	Every 6 years
Trichlorofluoromethane	0.15	502.2, 524.2	Every 6 years
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2	502.2, 524.2	Every 6 years
Vinyl Chloride	0.0005	502.2, 524.2	Every 6 years
Xylenes (total)	1.750	502.2, 524.2	Every 6 years
SOCs - Table 64444-A (b)			
Alachlor	0.002	505, 507, 508.1, 525.2	Waived
Alrazine	0.001	505, 507, 508.1, 525.2	Every 9 years
Bentazon	0.018		Waived
Benzo(a)pyrene	0.0002		Waived
Carbofuran	0.018		Waived
Chlordane	0.0001		Waived
2,4-D	0.07		Waived
Malapton	0.2		Waived
Dibromochloropropane (DBCP)	0.0002	504.1, 551.1	Waived
Di(2-ethylhexyl)adipate	0.4		Waived
Di(2-ethylhexyl)phthalate	0.004		Waived
Dinoseb	0.007		Waived
Diquat	0.02		Waived
Endothall	0.1		Waived
Endrin	0.002		Waived
Ethylene Dibromide (EDB)	0.00005	504.1, 551.1	Waived
Glyphosate	0.7		Waived
Heptachlor	0.00001		Waived
Heptachlor Epoxide	0.00001		Waived
Hexachlorobenzene	0.001		Waived
Hexachlorocyclopentadiene	0.05		Waived
Lindane	0.0002		Waived
Methoxychlor	0.03		Waived
Molinate	0.02		Waived
Oxamyl	0.05		Waived
Pentachlorophenol	0.001		Waived
Picloram	0.5		Waived
Polychlorinated Biphenyls	0.0005		Waived
Simazine	0.004	505, 507, 508.1, 525.2	Every 9 years
Thiobencarb	0.07		Waived
Toxaphene	0.003		Waived
2,3,7,8-TCDD (Dioxin)	0.00000003		Waived
2,4,5-TP (Silvex)	0.05		Waived

(1) This frequency applies only to chemicals for which previous results have shown no detectable results (ND).
Contact your district office for a special monitoring schedule when detectable results are found.

WATER QUALITY MONITORING SCHEDULE
Community System, >150 conn., <3300 population, groundwater near development (CMGD)
UPDATED - September 2015

Radiological Monitoring

Radioactivity - Section 64442	MCL	EPA Method	Frequency
Gross Alpha	15 pCi/L		Based on result of last sample (1)
Radium-226	5 pCi/L Combined		When (GA-Uranium) > 5 pCi/L (2)
Radium-228	Radium-226 + 228		Waived (1)
Uranium	20 pCi/L		When GA > 5 pCi/L (2)
Man Made Radioactivity - Section 64443			
Tritium	20000 pCi/L		Not Required
Strontium	8 pCi/L		Not Required
Gross Beta	50 pCi/L		Not Required

1. Routine Monitoring

a) Routine monitoring frequency for Gross Alpha is based on last sample collected.

Gross Alpha	Monitoring Frequency
Less than 3 pCi/L	1 sample every 9 years
≥ 3 and ≤ 7.5 pCi/L	1 sample every 6 years
> 7.5 and ≤ 15 pCi/L	1 sample every 3 years

b) Routine monitoring frequency for Radium-228 will be waived if there is no MCL exceedance.

2. Triggered Monitoring

A frequency is generally not assigned to radium-226 or uranium as the monitoring for these constituents is dependent on the gross alpha results.

- a) If the Gross Alpha particle activity is less than or equal to 5 pCi/L, analysis for Uranium is not required.
- b) If the Gross Alpha particle activity for any single sample is greater than 5 pCi/L, analysis for Uranium in that same sample is required. If any single sample for Uranium is greater than 20 pCi/L, monitor at least 4 quarters for Uranium.
- c) If the Gross Alpha particle activity is > 5 pCi/L, analysis for uranium may be used to obtain the radium-226 activity (GA - Uranium = Radium-226). If GA - Uranium > 0, contact your district office. If GA - Uranium < 0, report only the GA and Uranium results.

Contact your district office if the MCL is exceeded, or for clarification on monitoring frequencies.

NEW WELL WATER QUALITY MONITORING SCHEDULE
Community System, ≤3300 population, groundwater near development (NCSGD)
UPDATED - September 2015

Chemical - Title 22	MCL (mg/L)	EPA Method	Frequency (1)
Primary Inorganics - Section 64432			
Aluminum	1		Every 3 years
Antimony	0.006		Every 3 years
Arsenic	0.010		Every 3 years
Barium	1		Every 3 years
Beryllium	0.004		Every 3 years
Cadmium	0.005		Every 3 years
Chromium (Total Chromium)	0.05		Every 3 years (2)
Hexavalent Chromium (Chrome 6)	0.010	218.6 or 218.7	1 sample (2)(3)
Cyanide	0.15		Waived
Fluoride	2.0		Every 3 years
Mercury	0.002		Every 3 years
Nickel	0.1		Every 3 years
Perchlorate	0.006		2 Samples, 5 to 7 months apart (4)
Selenium	0.05		Every 3 years
Thallium	0.002		Every 3 years
Asbestos - Section 64432.2			
Asbestos - Source Water	7 MFL		Every 9 years
Asbestos - Distribution System sampling if Asbestos-Cement pipe used	7 MFL		Every 9 years if Aggressive Index ≤ 11.5
Nitrate/Nitrite - Section 64432.1			
Nitrate (as N)	10		Annually if ≤ 5 mg/L (5)
Nitrite (as nitrogen)	1		Every 3 years if ≤ 0.5 mg/L (6)
Nitrate + Nitrite (sum as nitrogen)	10		N/A
Secondary Standards - Table 64449-A			
Aluminum	0.2		Every 3 years
Color	15		Every 3 years
Copper	1.0		Every 3 years
Foaming Agents	0.5		Every 3 years
Iron	0.3		Every 3 years
Manganese	0.05		Every 3 years
Methyl-tert-butyl ether (MTBE)	0.005	502.2, 524.2	See MTBE frequency on page 2
Odor	3		Every 3 years
Silver	0.1		Every 3 years
Thiobencarb	0.001		Waived
Turbidity	5		Every 3 years
Zinc	5		Every 3 years
General Minerals - Section 64449			
Bicarbonate	N/A		Every 3 years
Carbonate	N/A		Every 3 years
Hydroxide Alkalinity	N/A		Every 3 years
Calcium	N/A		Every 3 years
Magnesium	N/A		Every 3 years
Sodium	N/A		Every 3 years
Hardness	N/A		Every 3 years
pH	N/A		Every 3 years
Secondary Standards - Table 64449-B			
TDS	500-1000;1500		Every 3 years
Specific Conductance	900-1600; 2200		Every 3 years
Chloride	250-500;600		Every 3 years
Sulfate	250-500;600		Every 3 years

MCL = Maximum Contaminant Level

Contact your district office with any questions.

- (1) Sampling shall be increased to quarterly following any result > MCL.
- (2) After initial hexavalent chromium monitoring, total chromium may be used if total chromium results are < 0.010 mg/L.
If total chromium result is ≥ 0.010 mg/L, monitoring for hexavalent chromium will be required.
- (3) Hexavalent chromium shall be increased to quarterly sampling following any result > 0.010 mg/L.
- (4) Perchlorate: At least 1 sample must be collected during the period from May 1 through September 30. If none detected, subsequent monitoring frequency will be every 3 years.
- (5) Nitrate (as N) replaces Nitrate (as NO₃). Nitrate (as N) sampling shall increase to quarterly following any result ≥ 5 mg/L.
Upon request, this may be reduced to an annual frequency after 4 quarters of monitoring. Beginning with Jan. 1, 2016, water systems shall comply with the Nitrate (as N) requirement.
- (6) Nitrite sampling shall be increased to quarterly following any result ≥ 0.5 mg/L. Upon request, this may be reduced to an annual frequency after 4 quarters of monitoring.

NEW WELL WATER QUALITY MONITORING SCHEDULE
Community System, ≤3300 population, groundwater near development (NCSGD)
UPDATED - September 2015

Chemical - Title 22	MCL (mg/L)	EPA Method	Frequency (1)
VOCs - Table 64444-A (a)			
Benzene	0.001	502.2, 524.2	3 annual samples, then every 6 years
Carbon Tetrachloride	0.0005	502.2, 524.2	3 annual samples, then every 6 years
1,2-Dichlorobenzene	0.6	502.2, 524.2	3 annual samples, then every 6 years
1,4-Dichlorobenzene	0.005	502.2, 524.2	3 annual samples, then every 6 years
1,1-Dichloroethane	0.005	502.2, 524.2	3 annual samples, then every 6 years
1,2-Dichloroethane	0.0005	502.2, 524.2	3 annual samples, then every 6 years
1,1-Dichloroethylene	0.006	502.2, 524.2	3 annual samples, then every 6 years
cis-1,2-Dichloroethylene	0.006	502.2, 524.2	3 annual samples, then every 6 years
trans-1,2-Dichloroethylene	0.01	502.2, 524.2	3 annual samples, then every 6 years
Dichloromethane	0.005	502.2, 524.2	3 annual samples, then every 6 years
1,2-Dichloropropane	0.005	502.2, 524.2	3 annual samples, then every 6 years
1,3-Dichloropropene	0.0005	502.2, 524.2	3 annual samples, then every 6 years
Ethylbenzene	0.3	502.2, 524.2	3 annual samples, then every 6 years
Methyl-tert-butyl ether (MTBE)	0.013	502.2, 524.2	3 annual samples, then every 6 years
Monochlorobenzene	0.07	502.2, 524.2	3 annual samples, then every 6 years
Styrene	0.1	502.2, 524.2	3 annual samples, then every 6 years
1,1,2,2-Tetrachloroethane	0.001	502.2, 524.2	3 annual samples, then every 6 years
Tetrachloroethylene (PCE)	0.005	502.2, 524.2	3 annual samples, then every 6 years
Toluene	0.15	502.2, 524.2	3 annual samples, then every 6 years
1,2,4-Trichlorobenzene	0.005	502.2, 524.2	3 annual samples, then every 6 years
1,1,1-Trichloroethane	0.200	502.2, 524.2	3 annual samples, then every 6 years
1,1,2-Trichloroethane	0.005	502.2, 524.2	3 annual samples, then every 6 years
Trichloroethylene (TCE)	0.005	502.2, 524.2	3 annual samples, then every 6 years
Trichlorofluoromethane	0.15	502.2, 524.2	3 annual samples, then every 6 years
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2	502.2, 524.2	3 annual samples, then every 6 years
Vinyl Chloride	0.0005	502.2, 524.2	3 annual samples, then every 6 years
Xylenes (total)	1.750	502.2, 524.2	3 annual samples, then every 6 years
SOCs - Table 64444-A (b)			
Alachlor	0.002	505, 507, 508.1, 525.2	Waived
Atrazine	0.001	505, 507, 508.1, 525.2	3 annual samples, then every 9 years
Bentazon	0.018		Waived
Benzo(a)pyrene	0.0002		Waived
Carbofuran	0.018		Waived
Chlordane	0.0001		Waived
2,4-D	0.07		Waived
Dalapon	0.2		Waived
Dibromochloropropane (DBCP)	0.0002	504.1, 551.1	Waived
Di(2-ethylhexyl)adipate	0.4		Waived
Di(2-ethylhexyl)phthalate	0.004		Waived
Dinoseb	0.007		Waived
Diquat	0.02		Waived
Endothall	0.1		Waived
Endrin	0.002		Waived
Ethylene Dibromide (EDB)	0.00005	504.1, 551.1	Waived
Glyphosate	0.7		Waived
Heptachlor	0.00001		Waived
Heptachlor Epoxide	0.00001		Waived
Hexachlorobenzene	0.001		Waived
Hexachlorocyclopentadiene	0.05		Waived
Lindane	0.0002		Waived
Methoxychlor	0.03		Waived
Molinate	0.02		Waived
Oxamyl	0.05		Waived
Pentachlorophenol	0.001		Waived
Picloram	0.5		Waived
Polychlorinated Biphenyls	0.0005		Waived
Simazine	0.004	505, 507, 508.1, 525.2	3 annual samples, then every 9 years
Thiobencarb	0.07		Waived
Toxaphene	0.003		Waived
2,3,7,8-TCDD (Dioxin)	0.00000003		Waived
2,4,5-TP (Silvex)	0.05		Waived

(1) This frequency applies only to chemicals for which previous results have shown no detectable results (ND). Contact your district office for a special monitoring schedule when detectable results are found. Also, please contact your district office if you would like to collect 4 consecutive quarters in lieu of 3 annual samples to satisfy the initial monitoring requirement.

NEW WELL WATER QUALITY MONITORING SCHEDULE
Community System, ≤3300 population, groundwater near development (NCSGD)
UPDATED - September 2015

Radiological Monitoring

Initial Monitoring Requirements

Radioactivity - Section 64442	MCL	EPA Method	Frequency
Gross Alpha	15 pCi/L		4 quarters initial monitoring * (1)
Radium-226	5 pCi/L Combined		When (GA-Uranium) > 5 pCi/L (2)
Radium-228	Radium-226 + 228		4 quarters initial monitoring * (1)
Uranium	20 pCi/L		When GA > 5 pCi/L (2)
Man Made Radioactivity - Section 64443			
Tritium	20000 pCi/L		Not Required
Strontium	8 pCi/L		Not Required
Gross Beta	50 pCi/L		Not Required

* If the results from the first two (2) quarters of initial monitoring are below the detection limit for the purposes of reporting (DLR), the final two (2) quarters of initial monitoring may be waived.

1. Routine Monitoring

- a) Subsequent monitoring frequency for Gross Alpha is based on last sample collected.

Gross Alpha	Monitoring Frequency
Less than 3 pCi/L	1 sample every 9 years
≥ 3 and ≤ 7.5 pCi/L	1 sample every 6 years
> 7.5 and ≤ 15 pCi/L	1 sample every 3 years

- b) Subsequent monitoring frequency for Radium-228 will be waived if there is no MCL exceedance.

2. Triggered Monitoring

A frequency is generally not assigned to radium-226 or uranium as the monitoring for these constituents is dependent on the gross alpha results.

- a) If the Gross Alpha particle activity is less than or equal to 5 pCi/L, analysis for Uranium is not required.
- b) If the Gross Alpha particle activity for any single sample is greater than 5 pCi/L, analysis for Uranium in that same sample is required. If any single sample for Uranium is greater than 20 pCi/L, monitor at least 4 quarters for Uranium.
- c) If the Gross Alpha particle activity is > 5 pCi/L, analysis for uranium may be used to obtain the radium-226 activity (GA - Uranium = Radium-226). If GA - Uranium > 0, contact your district office. If GA - Uranium < 0, report only the GA and Uranium results.

Contact your district office if the MCL is exceeded, or for clarification on monitoring frequencies.



State Water Resources Control Board

July 26, 2021

PWS No. 3410017

Audie Foster
Director of Northern Operations
California American Water Company
4701 Beloit Drive
Sacramento, CA 95838

2021 COMPLIANCE INSPECTION OF THE CALIFORNIA AMERICAN WATER COMPANY – PARKWAY PUBLIC WATER SYSTEM (PWS NO. 3410017)

On June 16, 2021, Bryan Rinde of the California State Water Resources Control Board Division of Drinking Water, accompanied by the California American Water Company (Cal Am) staff inspected the Cal Am – Parkway domestic water system (PWS No. 3410017).

Attached to this letter you will find a copy of the Compliance Inspection Report that documents inspection findings. **Please review the enclosed report and respond to the items listed in both the report and the Compliance Inspection Findings section (Appendix A) by the indicated response deadlines.**

If you have any questions, or if we can be of any assistance, please do not hesitate to contact Bryan Rinde by email at: Bryan.rinde@waterboards.ca.gov or by telephone at (916) 449-5666, or contact Michael Tolin at (916) 552-9995, or by email at Michael.tolin@waterboards.ca.gov.

Sincerely,

Ali R. Rezvani, P.E.
Sacramento District Engineer
Division of Drinking Water
STATE WATER RESOURCES CONTROL BOARD

Enclosure,

cc. Bryan Rinde, P. E. – Water Resource Control Engineer, DDW, SWRCB
Michael Tolin, P.E. – Associate Sanitary Engineer, DDW, SWRCB
Bruce DeBerry; bruce.deberry@cpuc.ca.gov
James Booth (especially Class A utilities); james.booth@cpuc.ca.gov
Moises Chavez (especially Class B, C, D utilities); moises.chavez@cpuc.ca.gov
Public Advocate Office, Richard Rauschmeier; Richard.Rauschmeier@cpuc.ca.gov
DRAWaterAL@cpuc.ca.gov

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

**State Water Resources Control Board
Division of Drinking Water
Compliance Inspection Report / Sanitary Survey**

Water System: California-American Water Company - Parkway (Parkway) **System Number:** 3410017
Person(s) Contacted/Position: Victoria Kunda (Manager, Water Quality/Environmental Compliance)
Inspection Date(s): June 16, 2021
Reviewing Engineer: Bryan Rinde, P.E.
District Engineer: Ali R. Rezvani, P.E.
Last Inspection Date & Reviewing Engineer: December 18 and 19, 2019, by Salvador Turrubiarres, P.E.

EXECUTIVE SUMMARY

MCL Exceedances:

Has the water system had a water quality exceedance since the last inspection (Yes/No): No
Has the water system had an operational failure since the last inspection (Yes/No): No
If the water system had a water quality exceedance or an operational failure since the last inspection, has DDW issued enforcement actions (Yes/No): No

Enforcement Actions Since the Last Inspection: None

Discussion: None

Permit:

Is the water system permit up-to-date (Yes/No): Yes
Does the water system have pending permit or permit amendment(s) application with DDW (Yes/No): No
If the water system needs new permit(s) or permit amendment(s), has water system submitted an application to DDW (Yes/No): No

Pending Permits: No

Discussion: No

Improvements: None requiring a permit amendment.

Does the water system have on-going or future planned improvement projects (Yes/No): None requiring a permit amendment.
If the water system has on-going or future planned improvement projects, do they need a permit from DDW (Yes/No): N/A

Discussion: N/A

Noted Deficiencies: None

Has the water system responded to previously noted deficiencies (Yes/No): N/A

Did the inspection reveal new deficiencies (Yes/No): No

Discussion:

Recommendations and Important Issues: None

Are there any recommendations or important issues (Yes/No): No

A. INTRODUCTION

1. Permit Status (Date Issued/Amendment Purpose)

Description: One permit and nine amendments have been issued to Cal Am - Parkway. Permit 01-09-94P-001 was issued on January 25, 1994. The dates and details of the nine permit amendments were issued are listed in Table 1 below.

Public Water System Classification: Community Water System (serves greater than 25 persons for more than six months of the year, also more than 15 service connections)

Table 1 - Permit Summary

#	Permit Number	Permit Type	Permit Date	Comments
0	01-09-94P-001	Initial	January 25, 1994	- Permit operation of 23 Sources Permitted under ownership of Citizens Utilities
1	01-09-01-PER-010	Amendment	December 3, 2001	- Permit operation of 23 wells under change of ownership (California American Water Company)
2	01-09-05-PER-006	Amendment	September 20, 2005	- Permit operation of the fluoridation treatment
3	01-09-06-PER-008	Amendment	May 12, 2006	- Permit change from 'gas chlorination' to 'sodium hypochlorite'
4	01-09-07-PER-011	Amendment	September 17, 2007	- Permit operation of Gerber Well with arsenic blending treatment at Parksite Water Treatment Plant
5	01-09-08-PER-002	Amendment	April 30, 2008	- Permit Elsie Well (Source No. 3410017-004) from 'Active' to 'Standby' source
6	2017PA-Schools-3410017	Amendment	January 18, 2017	- Lead testing in schools upon request
7	01-09-17-PER-014	Amendment	August 18, 2017	- Permit ion exchange treatment for hexavalent chromium (Cr-VI) for Sky Parkway Well (Source No. 3410017-012), Southgate Well (Source No. 3410017-013), and Stocker Well (Source No. 3410017-014) sources
8	01-09-18-PER-023	Amendment	November 2, 2018	- Permit Conrad Well (Source No. 3410017-003) from 'Active' to 'Inactive'
9	01-09-19-PER-006	Amendment	May 10, 2019	- Permit Park Well 01 (Source No. 3410017-009) as an 'Active' source

Table 2 - Permit Conditions

Permit	#	Condition
01-09-94P-001	1	The 'A' Parkway and Governor's Circle wells shall not be operated except in extreme emergencies as provided for in Section 64414, Chapter 15, Title 22, California Code of Regulations. Should these wells be operated, the Department must be notified within 7 days.
01-09-94P-001	2	The 55th Street well shall not be operated due to gasoline contamination.

Permit	#	Condition
01-09-94P-001	3	<p>By December 31, 1995, the plants' supervisor shall be a Grade IV and the plants' shift operators shall be Grade III's. Beginning immediately with the issuance of this permit and every six months thereafter, citizens shall report to the Drinking Water Field Operations Branch the efforts of both Citizens and its operators to attain the appropriate operator grade levels indicated above. Any subsequent operator certification regulation change shall supersede this permit condition with the exception of the final deadline of December 31, 1995 to achieve the appropriate grade level.</p> <p><i>Division comment: This condition superseded by current certification requirements in the regulations: Title 22 California Code Of Regulations Division 4. Environmental Health Chapter 13. Operator Certification.</i></p>
01-09-01-PER-010	1	Cal-Am shall comply with the provisions specified in Permit No. 01-09-94P-001 issued to Citizens on January 25, 1994.
01-09-01-PER-010	2	<p>Cal-Am shall comply with the provisions specified in Permit Amendments issued to Citizens on March 22, 1990, September 12, 1988, July 27, 1988, and December 7, 1979.</p> <p><i>Division comment: This condition not applicable as Permit 01-09-94P-001 superseded Permit Amendments issued to Citizens on March 22, 1990, September 12, 1988, July 27, 1988, and December 7, 1979.</i></p>
01-09-01-PER-010	3	Cal-Am shall comply with the directives specified in the letter from the Department to Citizens dated January 27, 1999 addressing the Annual Inspection Report (conducted on October 20, 1998).
01-09-01-PER-010	4	This change-of-ownership permit to operate the Parkway water systems will take effect immediately upon close of sale. If, for any reason, the sale of the Parkway system by Citizens to Cal-Am does not occur, this permit is to be considered void.
01-09-05-PER-006	a	<p>The only allowable fluoridation points are:</p> <p>Water Treatment Plants (WTPs)</p> <p>Countryside WTP</p> <p>Parksite WTP</p> <p>Vintage WTP</p>
01-09-05-PER-006	b	<p>Booster Pump Stations:</p> <p>A- Parkway (monitoring and fluoride supplementation of purchased water)</p> <p><i>Division comment: Water received from City of Sacramento via "A Parkway Booster Station" is already fluoridated. Cal Am Parkway does not boost fluoride residual.</i></p>
01-09-05-PER-006	c	<p>Production Wells:</p> <p>Briggs Drive (3410017-002)</p> <p>Rockhurst (3410017-011)</p> <p>Lippi Parkway (3410017-008)</p> <p>Sky Parkway (3410017-012)</p> <p>Southgate (3410017-013)</p> <p>Stocker (3410017-014)</p> <p>Vintage Park 1 (3410017-015)</p>
01-09-05-PER-006	d	Only hydrofluorosilicic acid (HFSA) shall be used as the fluoridating agent.

Permit	#	Condition										
01-09-05-PER-006	e	Cal Am shall fluoridate its water supplies to achieve an optimal fluoride level of 0.9 mg/L with a control range of 0.8 mg/L to 1.4 mg/L. <i>Division comments: This condition is superseded by: "The U.S. Department of Health and Human Services Agency (HHS) is recommending that water systems practicing fluoridation adjust their fluoride content to 0.7 mg/L (parts per million), as opposed to the previous temperature-dependent optimal levels ranging from 0.7 mg/L to 1.2 mg/L." adopted by the Division in April 2015.</i>										
01-09-05-PER-006	f	Cal Am shall operate its fluoridation facilities in accordance with the most current approved Operations and Maintenance (O&M) Plan.										
01-09-05-PER-006	g	Cal Am shall comply with the most current approved Operations Contingency Plan.										
01-09-05-PER-006	h	Cal Am shall conduct fluoride monitoring in accordance with the most current approved Fluoridation Monitoring Plan.										
01-09-05-PER-006	i	Cal Am shall maintain daily operational records for each fluoridation station including, as a minimum, flow rates, total volume of water treated, total volume of fluorosilicic acid used, operational changes, and unusual occurrences. A monthly report summarizing these records shall be submitted to the Department by the 25th day of the following month.										
01-09-05-PER-006	j	Cal Am shall submit to the Department an Annual Report on the status and condition of the system as directed by the Department.										
01-09-06-PER-008	a	The Cal Am -Parkway disinfection system shall be routinely inspected and the following records maintained: chlorine dose rate, free chlorine residual at the entry point to the distribution system, and well production readings.										
01-09-07-PER-011	a	The only sources approved for use in the blending process are: <table><tr><th>Source Name</th><th>PS Code</th></tr><tr><td>Gerber Well</td><td>3410017-006</td></tr><tr><td>Hemmingway Well</td><td>3410017-026</td></tr><tr><td>Parksite 2 Well</td><td>3410017-024</td></tr><tr><td>Wilbur 2 Well</td><td>3410017-018</td></tr></table>	Source Name	PS Code	Gerber Well	3410017-006	Hemmingway Well	3410017-026	Parksite 2 Well	3410017-024	Wilbur 2 Well	3410017-018
Source Name	PS Code											
Gerber Well	3410017-006											
Hemmingway Well	3410017-026											
Parksite 2 Well	3410017-024											
Wilbur 2 Well	3410017-018											
01-09-07-PER-011	b	No changes, additions, or modifications shall be made to the sources or treatment described in Condition 3(a) unless a permit amendment is first obtained from the CDPH.										
01-09-07-PER-011	c	The addition of blending treatment will result in the reclassification of the PWTP as a T3 facility. All personnel that operate the treatment facility shall be certified pursuant to the requirements specified in Title 22, Chapter 15, Section 64413.5.										
01-09-07-PER-011	d	Cal Am shall revise the preliminary O&M Plan for the blending process and submit it for CDPH approval no later than six months after this permit amendment is issued. Any subsequent changes to the plan shall be submitted to the CDPH for approval.										
01-09-07-PER-011	e	Cal Am shall operate the blending treatment process in accordance with the most recent O&M Plan approved by the CDPH.										
01-09-07-PER-011	f	During blending, the Gerber well shall be the last well activated and the first well deactivated under normal operating conditions. The CDPH shall be notified within three days if the Gerber well is operated alone.										
01-09-07-PER-011	g	During blending, the Gerber well shall be operated below the flow rates specified in the permit engineering report (Section 2.3.4). These flow rates may be reassessed provided that they are documented in an updated O&M plan. Pursuant to Condition (d), any changes to the plan shall be approved by the CDPH.										
01-09-07-PER-011	h	Cal Am shall report on the operational status of the sources and blending process using the reporting format provided by the CDPH (Appendix I). The monthly report shall be submitted to the CDPH no later than the 10th of following month.										

Permit	#	Condition												
01-09-07-PER-011	i	<p>As stated in Condition 2(h) above, blended water arsenic samples shall be collected under the following conditions.</p> <p>(A) The following parameters shall be monitored for process optimization purposes at the locations and frequencies specified below. Samples shall be collected whenever the Gerber well is activated during the specified monitoring Period.</p> <table><tr><th>Parameter</th><th>Location</th><th>Frequency</th></tr><tr><td>Instantaneous flow rate Onsite meter or SCADA</td><td>Each Source</td><td>Daily</td></tr><tr><td>Arsenic concentration (Hand held)</td><td>Blended effluent (Post-blending/ Pre-aeration)</td><td>Daily</td></tr></table> <p>(B) The required samples may be analyzed using CDPH approved handheld monitoring equipment.</p> <p>(C) If the arsenic concentration at the location specified in Condition 3(i)(A) exceeds the MCL, an arsenic sample shall be collected at the compliance location specified in condition 30) below. If the arsenic concentration at the compliance location exceeds the MCL, a split sample shall be collected and sent to a CDPH certified laboratory for analysis. The laboratory results shall be submitted to the CDPH for review.</p> <p><i>Division Note: Parkway water system is sampling in accordance with the Gerber Well Blending Process O&M Plan Dated December 2015.</i></p>	Parameter	Location	Frequency	Instantaneous flow rate Onsite meter or SCADA	Each Source	Daily	Arsenic concentration (Hand held)	Blended effluent (Post-blending/ Pre-aeration)	Daily			
Parameter	Location	Frequency												
Instantaneous flow rate Onsite meter or SCADA	Each Source	Daily												
Arsenic concentration (Hand held)	Blended effluent (Post-blending/ Pre-aeration)	Daily												
01-09-07-PER-011	j	<p>The arsenic concentration shall be monitored for compliance with the federal Arsenic Rule at the specified locations and frequencies. The samples shall be analyzed by a CDPH certified laboratory. The results shall be reported to the CDPH via Electronic Data Transfer (EDT) by the 10th of the month following the sampling month.</p> <table><tr><th>Parameter</th><th>Location</th><th>PS Code</th><th>Frequency</th></tr><tr><td>Arsenic</td><td>Post-clearwell (Entry Point to the Distribution S stem</td><td>3410017-034</td><td>Weekly</td></tr><tr><td>Arsenic</td><td>Gerber Hemmingway Parksite 2 Wilbur 2</td><td>3410017-006 3410017-026 3410017-024 3410017-018</td><td>Monthly</td></tr></table> <p><i>Division Note: Parkway water system is sampling in accordance with the Gerber Well Blending Process O&M Plan Dated December 2015.</i></p>	Parameter	Location	PS Code	Frequency	Arsenic	Post-clearwell (Entry Point to the Distribution S stem	3410017-034	Weekly	Arsenic	Gerber Hemmingway Parksite 2 Wilbur 2	3410017-006 3410017-026 3410017-024 3410017-018	Monthly
Parameter	Location	PS Code	Frequency											
Arsenic	Post-clearwell (Entry Point to the Distribution S stem	3410017-034	Weekly											
Arsenic	Gerber Hemmingway Parksite 2 Wilbur 2	3410017-006 3410017-026 3410017-024 3410017-018	Monthly											
01-09-08-PER-002	a	The Elsie well shall be operated in accordance with the standby source requirements specified in Title 22, Chapter 15, Article 2, Section 64414, of the CCR.												
2017PA-SCHOOLS-3410017	1	This permit amendment applies to each public water system that serves drinking water to at least one or more of grades Kindergarten through 12th grade school for which a request for lead sampling has been made prior to November 1, 2019, as provided for in Provision 3.												
2017PA-SCHOOLS-3410017	2	Each water system shall submit to the SWRCB's Division of Drinking Water (DOW) a comprehensive list of the names and addresses of all Kindergarten through 12th grade schools that are served water through a utility meter by July 1, 2017. The list shall be in the format and method posted on the DOW Lead Sampling in California Schools website.												

Permit	#	Condition
2017PA-SCHOOLS-3410017	3	<p>If an authorized school representative, (the superintendent or designee of a school, governing board or designee of a charter school, or administrator or designee of a private school) of a school served by the water system requests one-time assistance with lead sampling in writing, the water system shall:</p> <p>a. Respond in writing within 60 days of receiving the school's lead sampling request and schedule a meeting with school officials, including at least one staff member familiar with the school's water infrastructure, to develop a sampling plan. An example school lead sampling plan is located on the DDW Lead Sampling in California Schools website. The sampling plan may use the USEPAs "3Ts for Reducing Lead in Drinking Water in Schools" as general guidance. The 3T document can be found online at: https://www.epa.gov/sites/production/files/2015-09/documents/toolkit_lead_schools_guide_3ts_lead_schools.pdf</p> <p>b. Finalize a sampling plan and complete the initial sampling within 90 days of receiving the lead sampling request, except that if the water system cannot complete the sampling plan and the lead sampling in that time period, the water system shall develop and comply with a time schedule to complete the sampling plan and initial lead sampling that has been approved by DDW.</p> <p>c. Collect from one to five samples at each school from regularly used drinking fountains, cafeteria/food preparation areas, or reusable bottle water filling stations selected according to the lead sampling plan described in Provision 3 (b) using the sampling guidance located in Appendix A (Sampling Guidance) which is attached. Sample sites may be either treated or untreated.</p> <p>d. Collect lead samples during the school year, on a Tuesday, Wednesday, Thursday or Friday during a day school is in session and has been in session for at least one school day prior to the date of sampling.</p> <p>e. Ensure that samples are collected by a water system representative that is adequately trained to collect lead and copper samples.</p> <p>f. Submit the samples to an ELAP certified laboratory for analysis of lead.</p> <p>g. Require the laboratory to submit the data electronically to DDW in accordance with the electronic submittal guidance which is located on the DDW Lead Sampling in California Schools website.</p> <p>h. Provide a copy of the results to the requesting authorized school representative.</p> <p>i. Within two school business days of receipt of a laboratory result that shows an exceedance of 15 parts per billion (ppb) at a sample site, notify the school of the sample result.</p> <p>j. If an initial lead sample result shows an exceedance of 15 parts per billion (ppb) at a sample site,</p> <p>i. Collect an additional sample (resample) within 10 business days of receipt of the laboratory result above 15 ppb if the sample site remains in service.</p> <p>ii. Collect a third sample within 10 business days after notification that a resample result described above is less than or equal to 15 ppb.</p> <p>iii. If the sample site is removed from service by the school, do not collect the repeat samples unless the school has completed corrective actions.</p> <p>iv. Collect at least one more lead sample at a sample site where the school has completed some corrective action following an initial lead sample result over 15 ppb (examples of corrective action are replacing interior piping, replacing faucet, installing filters, etc.)</p> <p>k. Ensure that it receives the results of the repeat lead samples required in Provision 3U) from the laboratory no more than 10 business days after the date of sample collection.</p> <p>l. Not release the lead sampling data to the public for 60 days following the receipt of the initial lead sampling results unless the water system releases the data in compliance with a Public Records Act (PRA) request for the specific results.</p>

Permit	#	Condition
2017PA-SCHOOLS-3410017	4	<p>4. The water system may stop lead sampling at a school if: a. All initial samples are less than or equal to 15 ppb; or b. Repeat sampling has been analyzed for each sample location with an initial lead sample greater than 15 ppb in accordance with Provision 3, and either:</p> <p>i. If lead is confirmed over 15 ppb and the sample location has subsequently been physically removed from service, or</p> <p>ii. If the sample location remains in service, and</p> <p>a. If lead is confirmed over 15 ppb and the school has taken some corrective actions at the sample location and the water system has collected at least one additional lead sample after the corrective actions and the result is less than or equal to 15 ppb, or</p> <p>b. If lead is less than or equal to 15 ppb in both the first repeat sample and second repeat sample described in Provision 3 U).</p> <p>c. A written request from the water system to terminate lead sampling assistance has been approved by DOW.</p> <p>d. If requested in writing by the school's authorized school representative</p>
2017PA-SCHOOLS-3410017	5	<p>The water system is responsible for the following costs:</p> <p>a. Laboratory fees for all lead samples and reporting of the results to DOW and the school, and all laboratory coordination and instruction.</p> <p>b. All water system staff time dedicated to the tasks required by the provisions in this permit amendment.</p>
2017PA-SCHOOLS-3410017	6	<p>The water system may not use any lead samples collected as part of these special school samples to satisfy federal or state Lead and Copper Rule requirements.</p>
2017PA-SCHOOLS-3410017	7	<p>The water system shall communicate with the school after lead sampling and assist the school with the interpretation of laboratory results and provide information regarding potential corrective actions if a school has confirmed lead levels above 15 ppb. The water system is not responsible to pay for any maintenance or corrections needed at the school if elevated lead levels are found in the drinking water. The water system is not responsible for determining any corrective actions needed at the school.</p>
2017PA-SCHOOLS-3410017	8	<p>The water system shall keep records of all written requests from a school for lead related assistance and provide the records to DOW, upon request. Records shall include, at a minimum, the following information:</p> <p>a. The name of the school. If a school district makes a request, the school district's name shall be recorded along with each individual school served by the water system that is requesting sampling;</p> <p>b. The date of the request;</p> <p>c. The date of the initial meeting;</p> <p>d. The date of the sampling plan along with a copy of each sampling plan; and</p> <p>e. The date of initial lead sampling and all repeat samples.</p>
2017PA-SCHOOLS-3410017	9	<p>The water system's annual Consumer Confidence Report shall include a statement summarizing the number of schools requesting lead sampling.</p>
01-09-17-PER-014	a	<p>The Cal Am Parkway public water system shall comply with all the requirements set forth in the California Safe Drinking Water Act, California Health and Safety Code and any regulations, standards or orders adopted thereunder.</p>

Permit	#	Condition																																																													
01-09-17-PER-014	b	Only the following sources and treatment processes are approved for use.																																																													
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01-09-17-PER-014	f	The Sky Parkway Well GAC treatment facilities shall be operated in accordance with the approved SKY PARKWAY WELL SITE - 5029 SKY _PARKWAY OPERATIONS PLAN. Cal Am Parkway may modify the plan at any time to accommodate changing conditions; however, any modified plan must be submitted to and be approved by Division prior to implementation. At any time, Division can require Cal Am Parkway to modify the plan due to changing conditions, change of laws or regulations, or concerns for public health.																																		
01-09-17-PER-014	g	The GAC facility's maximum design flow of 1,000 gallons per minute (gpm) shall not be exceeded.																																		
01-09-17-PER-014	h	Cal Am Parkway shall monitor TCP concentrations through each vessel such that Cal Am Parkway is able to anticipate the breakthrough of TCP in each GAC vessel, and shall arrange for timely and efficient change out of the spent GAC. Cal Am Parkway shall monitor according to the approved Operations Plan which shall include sample locations, frequencies, and set points that will trigger increased TCP monitoring and a GAC media change out.																																		
01-09-17-PER-014	i	The GAC contactors shall be maintained according to the manufacturer's specifications.																																		
01-09-17-PER-014	j	Cal Am Parkway shall use only virgin carbon when replacing the expended carbon in the GAC vessels. No changes shall be made to the type of the carbon used without prior approval from Division.																																		
01-09-17-PER-014	k	Cal Am Parkway shall inspect the GAC vessels in accordance to the approved Operations and Maintenance Plan, and GAC operations records shall be maintained. Operations records shall include, at minimum, flow rate, total volume treated, chlorine residual measurements, and monthly bacteriological samples testing.																																		

Permit	#	Condition
01-09-17-PER-014	i	Cal Am Parkway shall monitor the bacteriological quality of the treated water at the effluent of each GAC vessel prior to the ion exchange treatment and chlorination on a monthly basis, and prior to activating any vessel that has been out-of-service for more than 24 hours and following the installation of GAC media. Cal Am Parkway shall have the samples analyzed for total coliform and heterotrophic plate count (HPC) bacteria. Cal Am Parkway shall monitor according to the approved Operations Plan which shall include set points that will trigger GAC system maintenance.
01-09-17-PER-014	m	All treated water from the GAC filters shall be continuously and reliably chlorinated to a residual of at least 0.2 mg/L at all times. The chlorine residual shall be measured continuously at a sampling point located before the treated water reaches the first customer in the system.
01-09-17-PER-014	n	Cal Am Parkway shall keep a complete record of any emergency and scheduled interruptions in water service. These records should include: i. Location of the problem. ii. Cause of the interruption. iii. Date and approximate time of the problem. iv. Precautions taken to minimize contamination of the supply and notification of affected users. v. Resolution of the interruption.
01-09-17-PER-014	o	Cal Am Parkway shall submit a monthly operation report and copies of any water quality test results to Division by the tenth day of the following month. The monthly report shall follow the template contained in the approved Operations Plan. i. For the GAC vessels, the report shall include, at a minimum, flow rates, total volume treated during the month, bed volumes treated since the last carbon change-out, and a summary of the TCP and bacteriological monitoring.
01-09-17-PER-014	p	Cal Am Parkway shall record the water production output on a monthly basis. Written water production records shall be maintained by Cal Am Parkway for a minimum of ten years and be available to Division during inspections.
01-09-17-PER-014	q	All water samples for compliance purposes shall be analyzed by a laboratory certified by Division's Environmental Laboratory Accreditation Program (ELAP) for each analytical method.
01-09-17-PER-014	r	All water quality monitoring results analyzed by a certified laboratory shall be submitted to Division by Electronic Data Transfer (EDT) using the assigned Primary Station Codes of the monitoring site listed in permit condition 5 of this permit. Bacteriological monitoring results shall be submitted by hard copy to Division unless otherwise directed.
01-09-17-PER-014	s	The Sky Parkway Well SBA-IX treatment facilities shall be operated in accordance with the approved SKY PARKWAY WELL SITE - 5029 SKY PARKWAY OPERATIONS PLAN. Cal Am Parkway may modify the plan at any time to accommodate changing conditions; however, any modified plan must be submitted to and be approved by Division prior to implementation. At any time, Division can require Cal Am Parkway to modify the plan due to changing conditions, change of laws or regulations, or concerns for public health.
01-09-17-PER-014	t	The Southgate Well SBA-IX treatment facilities shall be operated in accordance with the approved SOUTHGATE WELL SITE - 4150 FLORIN RD OPERATIONS PLAN. Cal Am Parkway may modify the plan at any time to accommodate changing conditions; however, any modified plan must be submitted to and be approved by Division prior to implementation. At any time, Division can require Cal Am Parkway to modify the plan due to changing conditions, change of laws or regulations, or concerns for public health.
01-09-17-PER-014	u	The Stoker Well SBA-IX treatment facilities shall be operated in accordance with the approved STOCKER WELL SITE - 7006 STOCKER WAY OPERATIONS PLAN. Cal Am Parkway may modify the plan at any time to accommodate changing conditions; however, any modified plan must be submitted to and be approved by Division prior to implementation. At any time, Division can require Cal Am Parkway to modify the plan due to changing conditions, change of laws or regulations, or concerns for public health.

Permit	#	Condition
01-09-17-PER-014	v	The SBA-IX treatment processes at the Sky Parkway Well, Southgate Well, and Stoker Well are approved to be operated utilizing two SBA-IX vessels for hexavalent Chromium removal (a lead and a lag vessel in series). The SBA-IX treatment processes shall be operated at flow rates within the operational guidelines set-forth by the manufacturer and listed previously in this report. Any changes to the SBA-IX treatment processes at the Sky Parkway Well, Southgate Well, and Stoker Well must be first reviewed and approved by the Division.
01-09-17-PER-014	w	When the effluent from the lead vessel(s) at the Sky Parkway Well, Southgate Well, and Stoker Well is equal to the hexavalent chromium MCL, the vessel(s) shall be removed from service and the resin shall be replaced. After the resin has been replaced, the vessel(s) shall be placed into the lag position, and the previous lag vessel(s) will be placed into the lead position. If, at any time, the effluent from the lag vessel has hexavalent chromium at 80% MCL or more, the resin shall be changed.
01-09-17-PER-014	x	Cal-Am shall monitor total coliforms and HPC monthly at the hexavalent chromium lag vessel(s) effluent (PS Code(s) 3410017-047, 3410017-050, and 3410017-052 respectively) and report the results to the Division by the tenth day of the following month. The respective plant effluents should be free of total coliform bacteria. If E.Coli is detected at any time, the Cal Am shall cease operation of the affected well(s), and inform the Division within 24 hours of the occurrence.
01-09-17-PER-014	y	If total coliform bacteria is detected or HPC is greater than 500 cfu/mL, Cal Am shall inform the Division within 24 hours and begin weekly total coliform, E.Coli and HPC monitoring at effluent of the affected hexavalent chromium treatment system(s). The Division may require additional investigation or action to be taken by the Cal Am. The Cal Am shall continue weekly bacteriological monitoring until otherwise instructed by the Division. If monitoring results indicate a sudden or significant increase in coliform bacteria or HPC, the Division may require the Cal Am to shut down the treatment facility, or facilities, and take further action, such as media disinfection (if possible) and/or replacement.
01-09-17-PER-014	z	If at any time the media is changed-out, transferred, or added to, Cal Am shall ensure the effluent from the media is free from coliform bacteria prior to water being released into the distribution system.
01-09-17-PER-014	aa	The SKY PARKWAY WELL SITE - 5029 SKY PARKWAY OPERATIONS PLAN, The SOUTHGATE WELL SITE - 4150 FLORIN RD OPERATIONS PLAN, And The STOCKER WELL SITE - 7006 STOCKER WAY OPERATIONS PLAN (All Dated October 2016), need to be reviewed and resubmitted for filing (as shown in Appendices 1-13, 11- 10, and 111-9). Should there be any difference(s) between the plan and this permit, the permit conditions shall prevail. Changes to the plan must be first reviewed and approved by the Division.
01-09-17-PER-014	bb	The alarm set point for Very Low Chlorine Residual shall be set at no less than 0.2 mg/L of free chlorine residual.
01-09-17-PER-014	cc	The resin approved for the Sky Parkway Well, Stocker Well, and Southgate Well Treatment Plant SBA-IX vessels (hexavalent chromium removal vessels) shall be NSF 61 approved. When resin changed-out, transferred, or added to, Cal Am shall install this resin, which is certified to meet the ANSI/NSF 61 Standard for drinking water system components. Any changes to the resin must be first reviewed and approved by the Division.
01-09-17-PER-014	dd	Monitoring of the Sky Parkway Well, Stocker Well, and Southgate Well treatment plants shall be performed monthly for hexavalent chromium from the lead hexavalent chromium IX effluent and quarterly for hexavalent chromium from the lag hexavalent chromium IX effluent, from all treatment plants. All analysis must be performed by a State certified laboratory, and all monitoring results must be submitted by the laboratory via EDT using the PS Codes provided. The results of all monitoring shall be submitted in a monthly report to the Division by the tenth day of the following month. Monitoring requirements may be revised based on the available results.

Permit	#	Condition
01-09-17-PER-014	ee	The Cal Am shall notify the Division within 24 hours whenever: i. There is a failure to maintain a free chlorine residual of 0.2 mg/L in any of the treatment plant(s) effluent water delivered to the distribution system. There is an incident or discovery at any of the treatment facilities that may adversely affect the potability of water for domestic use.
01-09-17-PER-014	ff	All instruments, including but not limited to chemical analyzers and flow meters, shall be calibrated at the frequencies and by the methods recommended by their respective manufacturers. Records for all instrument calibrations shall be maintained by the Cal Am and made available to the Division when requested.
01-09-17-PER-014	gg	The alarms and automatic shutdowns related to water quality of the plant shall be physically tested at least quarterly. Records of the quarterly testing shall be maintained by the Cal Am, and made available to the Division when requested for a minimum of three years.
01-09-17-PER-014	hh	Cal Am shall maintain an Operator's Log Book and/or device to record all activities, events, and problems with the operation of the treatment plant.
01-09-17-PER-014	ii	Cal Am shall submit a summary of events (alarms and shutdowns) triggered by the reliability features of the plant operations. This summary shall be submitted to the Division weekly for the first month of plant operations and by the tenth of the following month thereafter.
01-09-17-PER-014	jj	Cal Am shall submit an annual report at the end of one year of operation summarizing the problems and solutions encountered and major repairs or resin replacement or changes.
01-09-17-PER-014	kk	No changes, additions, or modifications shall be made to the sources, inter-ties, or treatment processes listed above unless an amended water supply permit has been obtained from the Division.
01-09-17-PER-014	ll	In accordance with Section 64590, Article 7, Chapter 16, Division 4, Title 22 of the CCR, the Cal Am Parkway public water system shall only use ANSI/NSF 60 certified chemicals.
01-09-17-PER-014	mm	All process and compliance monitoring shall be conducted in accordance with the most recent Operation and Maintenance Plan for each respective facility in the Cal Am Parkway water system in its entirety and shall be submitted to the Division by the 10th of the month following the receipt of the monitoring results.
01-09-17-PER-014	nn	In accordance with Section 64591, Article, 7, Chapter 16, Division 4, Title 22 of the CCR, all materials in contact with drinking water shall be tested and certified as meeting the specification of it respective ANSI/NSF 61 Standard. This requirement shall be met under testing conducted by a product certification organization accredited for this purpose by the American National Standards Institute.
01-09-17-PER-014	oo	The Cal Am Parkway public water system shall submit to the Division an Annual Report as directed by the Division.
01-09-17-PER-014	pp	All water supplied by the Cal Am Parkway public water system for domestic purposes shall meet the Maximum Contaminant Levels (MCLs) and Action Levels (ALs) established by the Division. If the water quality does not comply with the California Drinking Water Standards, treatment shall be provided to meet the standards.
01-09-17-PER-014	qq	All personnel who operate the distribution systems and treatment facilities shall be certified in accordance with California Code of Regulations, Title 22, Chapter 13.
01-09-17-PER-014	rr	Cal Am Parkway public water system shall comply with California Code of Regulations, Title 17, as it pertains to cross-connection control. The Cal Am Parkway public water system shall maintain a program that protects the domestic water system against backflow from premises using dual or unsafe water systems in accordance with Title 17. All backflow prevention devices shall be tested at least once annually.
01-09-17-PER-014	ss	Cal Am Parkway public water system shall provide continuous disinfection treatment and chlorine residual monitoring at all sources in compliance with the Groundwater Rule, and all subsequent amendments pertaining to these Federal and State adopted drinking water regulations.

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01-09-17-PER-014	tt	Cal Am Parkway public water system shall maintain an up-to-date agreement with the city of Sacramento public water system where there are two distribution system interties.												
01-09-17-PER-014	uu	Cal Am Parkway public water system shall ensure that the Strong Base Anion Exchange and bypass (blending) system treatment, the fluoridation system, and the disinfection treatment would be in operation when the water from the treatment site's respective groundwater well is in operation and groundwater is entering the distribution system.												
01-09-17-PER-014	vv	Cal Am Parkway public water system shall maintain all groundwater sources and facilities to ensure their proper operation.												
01-09-18-PER-023	a	The Water System shall comply with all the requirements set forth in the California Safe Drinking Water Act, CH&SC, CCR, and any regulations, standards, or orders adopted thereunder.												
01-09-18-PER-023	b	<p>The status of the following source codes have been changed from "Active" to "Inactive":</p> <table><tr><th>Sources</th><th>Type</th><th>PS Code</th><th>Status</th></tr><tr><td>Conrad Drive Well</td><td>Groundwater</td><td>3410017-003</td><td>Inactive</td></tr><tr><td>Conrad Drive Well – Treated</td><td>Groundwater</td><td>3410017-045</td><td>Inactive</td></tr></table>	Sources	Type	PS Code	Status	Conrad Drive Well	Groundwater	3410017-003	Inactive	Conrad Drive Well – Treated	Groundwater	3410017-045	Inactive
Sources	Type	PS Code	Status											
Conrad Drive Well	Groundwater	3410017-003	Inactive											
Conrad Drive Well – Treated	Groundwater	3410017-045	Inactive											
01-09-18-PER-023	c	The Water System shall operate the domestic water supply and distribution system in its entirety in accordance with the most recent Operation and Maintenance Plan reviewed and approved by the Division.												
01-09-18-PER-023	d	The Water System shall apply and secure a water supply permit prior to reactivation of the source inactivated by this permit.												
01-09-18-PER-023	e	The water system shall physically disconnect the abovementioned source from the water system distribution system network by December 15, 2018.												
01-09-19-PER-006	a	<p>The following source is added into the existing permit and permit amendments:</p> <table><tr><th>Name</th><th>Status</th><th>PS Code</th></tr><tr><td>Parksite Well 01 - Raw</td><td>Active</td><td>3410017-009</td></tr><tr><td>Parksite WTP - Treated</td><td>Active</td><td>3410017-034</td></tr><tr><td>Parksite WTP - Blended Influent</td><td>Active</td><td>3410017-042</td></tr></table>	Name	Status	PS Code	Parksite Well 01 - Raw	Active	3410017-009	Parksite WTP - Treated	Active	3410017-034	Parksite WTP - Blended Influent	Active	3410017-042
Name	Status	PS Code												
Parksite Well 01 - Raw	Active	3410017-009												
Parksite WTP - Treated	Active	3410017-034												
Parksite WTP - Blended Influent	Active	3410017-042												
01-09-19-PER-006	b	The Water System shall apply and secure a permit amendment for operation of the Parksite water treatment plant if changes in operation result in changes to the Parksite water treatment plant classification. The water treatment plant shall be operated by qualified operators certified in accordance with Chapter 13, Division 4, Title 22 of the CCR.												
01-09-19-PER-006	c	No changes, additions, or modifications shall be made to the source listed in this permit unless an amended water supply permit has been obtained from the Division in accordance with CCR, Title 22, Division 4, Chapter 16, Article 2, Section 64556.												
01-09-19-PER-006	d	The Water System shall include the source listed in this permit amendment in all future electronic Annual Reports to the Division.												
01-09-19-PER-006	e	The Water System shall provide continuous disinfection treatment for the water produced by the source listed in this permit amendment.												
01-09-19-PER-006	f	All water monitoring equipment such as; meters, flow totalizers, on line analyzers, process instrumentations, etc. shall be calibrated as recommended by the manufacturer. Records of the calibrations shall be maintained for at least five years.												
01-09-19-PER-006	g	Parksite Well 01 -Raw (3410017-009) raw water shall be monitored quarterly for total coliform and E.												
01-09-19-PER-006	h	Within 24 hours of receiving notification from the laboratory, the Water System shall notify the Division of any exceedance of an MCL.												

Permit	#	Condition
01-09-19-PER-006	i	California American Water Company shall operate the Water System groundwater treatment plants in accordance with their respective Operation and Maintenance Plans, which have been reviewed and approved by the Division. The Water System shall submit to the Division for review and approval any updates to the operations plan.
01-09-19-PER-006	j	All water supplied by the Water System for domestic purposes shall meet the Maximum Contaminant Levels (MCLs), Notification Levels (NLs), and Action Levels (ALs) established by the Division. If the water quality does not comply with the California Drinking Water Standards, treatment shall be provided to meet the standards.
01-09-19-PER-006	k	In accordance with CCR, Title 22, Division 4, Chapter 16, Article 7, Section 64590, all treatment chemicals and chemical dosage rates used in the treatment process shall be in accordance with NSF Standard 60 requirements.
01-09-19-PER-006	l	In accordance with CCR, Title 22, Division 4, Chapter 16, Article 7, Section 64591, all materials in contact with drinking water shall be tested and certified as meeting the specification of ANSI/NSF Standard 61.
01-09-19-PER-006	m	Parkside Well 01 -Raw (3410017-009), Parkside WTP-Treated (3410017- 034), and Parkside WTP -Blended (3410017-042) shall be incorporated into a revised Water System monitoring plan, Operations and Maintenance Plan, Bacteriological Sample Siting Plan, and other monitoring and operation related plans necessary for operation of this source and the public water system.
01-09-19-PER-006	n	Parkside Well 01 -Raw (3410017-009), Parkside WTP-Treated (3410017- 034), and Parkside WTP-Blended (3410017-042) operation records shall be maintained by the Water System and made available to the Division for review and comment upon request.

2. ENFORCEMENT

California Health and Safety Code, Part 12, Chapter 4, Article 9: Remedies

Number of enforcements since last inspection: None

3. SYSTEM CHANGES

Changes since the last inspection: None requiring a permit amendment.

4. CONSUMER AND PRODUCTION DATA

Table 3 – Water System Historic Data

Year	Service Connections	Population ^A	Demand (MG)								Max. Daily Demand (GPM) ^B	Peak Hourly Demand (GPM) ^B
			Max Day			Max Month			Year			
			Produced	Received	Date	Produced	Received	Month	Produced	Received		
2011	14,259	47,045	17.8	0.0	9/6/2011	416	0.0	August	3,055	122	18,578	27,867
2012	14,110	46,563	15.1	0.0	8/13/2012	381	29	August	2,958	306	15,684	23,527
2013	14,251	47,029	NR	NR	NR	381	42	July	2,948	380	14,220	21,331
2014	14,865	49,055	NR	NR	NR	308	0.0	July	2,585	4.0	10,363	15,545
2015	14,068	46,422	NR	NR	NR	202	28	July	2,012	197	7,713	11,570
2016	14,388	47,477	NR	NR	NR	266	1.0	July	2,051	17	8,985	13,478
2017	14,525	45,863	NR	NR	NR	238	50	July	2,140	102	9,679	14,519
2018	14,716	48,563	NR	NR	NR	298	0.0	July	2,413	0.0	10,030	15,045
2019	14,784	48,804	9.8	1.0	7/28/2019	262	28	July	2,176	298	11,281	16,922
2020	14,779	48,738	12.3	0.0	7/4/2020	311	50	July	2,203	574	12,792	19,188

Notes: A Data from electronic annual water system reports

B Per Section 64554, maximum day demand determined by reported max day demand, when maximum day demand was not reported, maximum month was used to calculate max day demand, when maximum month was not reported annual demand was used to calculate max day demand.

C 1.5 times max day demand

D Significant outlier, not used for demand calculations

NR not reported in electronic annual water system report

Discussion and Appraisal: The maximum day demand was determined in accordance with Chapter 16, California Waterworks Standards, §64554. New and Existing Source Capacity. The max day demand scenario is based on the highest yearly max day demand or calculated yearly max day demand in the last ten years. The maximum day demand for Parkway water system is 18,578-GPM and peak hour demand is 27,867-GPM based on max day demand data provided in 2011.

B. SOURCE DATA

California Code of Regulations, Title 22, Chapter 16, Article 3: Water Sources

Table 4 – Sources

#	Sources	PS Code	Status	Pressure ¹ (psi)	Capacity ² (gpm)	Comments
1	Briggs Well	3410017-002	Active	50 - 60	991	<ul style="list-style-type: none"> - 60-hp water-lubricated turbine pump - Equipped with 6,000-gallon hydropneumatic tank - Equipped with flow meter - Equipped with sodium hypochlorite facilities - Equipped with hydrofluorosilicic-acid facilities - Equipped with pump-to-waste - Equipped with generator connection port
2	Elsie Avenue Well	3410017-004	Standby	50 – 60	530	<ul style="list-style-type: none"> - 50-hp oil-lubricated turbine pump - Equipped with 6,000-gallon hydropneumatic tank - Equipped with flow meter - Equipped with pump-to-waste
3	Gerber Drive Well	3410017-006	Active	Pumps to Parksite Treatment Plant	1,450	<ul style="list-style-type: none"> - 100-hp oil-lubricated turbine pump - Equipped with flow meter - Equipped with pump-to-waste Iron > MCL (300 ppb) - Equipped with generator connection port
4	Lippi Parkway Well	3410017-008	Active	60 – 75	620	<ul style="list-style-type: none"> - 40-hp oil-lubricated turbine pump - Equipped with 6,000-gallon hydropneumatic tank - Equipped with flow meter - Equipped with sodium hypochlorite facilities - Equipped with hydrofluorosilicic-acid facilities - Equipped with pump-to-waste - Equipped with generator connection port
5	Parksite 01	3410017-009	Active	Pumps to Parksite Treatment Plant	550 gpm	<ul style="list-style-type: none"> - Equipped with a 100 Hp submersible pump - Equipped with pump-to-waste
6	Rockhurst Well	3410017-011	Active	50 – 70	850	<ul style="list-style-type: none"> - 75-hp water-lubricated turbine pump - Equipped with 6,000-gallon hydropneumatic tank - Equipped with flow meter - Equipped with sodium hypochlorite facilities - Equipped with hydrofluorosilicic-acid facilities - Equipped with pump-to-waste - Equipped with sand separator - Equipped with generator

#	Sources	PS Code	Status	Pressure ¹ (psi)	Capacity ² (gpm)	Comments
7	Sky Parkway Well	3410017-012	Active	60 - 70	700	<ul style="list-style-type: none"> - 75-hp water-lubricated turbine pump - Equipped with 6,000-gallon hydropneumatic tank - Equipped with flow meter - Equipped with generator connection port - Equipped with sodium hypochlorite facilities - Equipped with hydrofluorosilicic-acid facilities - Equipped with pump-to-waste - Equipped with two GAC treatment vessels on site - Equipped with two Ion Exchange (IX) treatment vessels on site
8	Southgate Well	3410017-013	Active	60 - 75	880	<ul style="list-style-type: none"> - 100-hp water-lubricated turbine pump - Equipped with 6,000-gallon hydropneumatic tank - Equipped with two Ion Exchange (IX) treatment vessels on site - Equipped with flow meter - Equipped with sodium hypochlorite facilities - Equipped with hydrofluorosilicic-acid facilities - Equipped with pump-to-waste
9	Stocker Well	3410017-014	Active	45 - 55	600	<ul style="list-style-type: none"> - 60-hp water-lubricated turbine pump - Equipped with 6,000-gallon hydropneumatic tank - Equipped with flow meter - Equipped with sodium hypochlorite facilities - Equipped with hydrofluorosilicic-acid facilities - Equipped with pump-to-waste - Equipped with two Ion Exchange (IX) treatment vessels on site
10	Vintage Park 01	3410017-015	Active	60 - 70	925	<ul style="list-style-type: none"> - 75-hp water-lubricated turbine pump - Equipped with 6,000-gallon hydropneumatic tank - Equipped with flow meter - Equipped with sodium hypochlorite facilities - Equipped with hydrofluorosilicic-acid facilities - Equipped with pump-to-waste
11	Vintage Park 02	3410017-016	Active	Pumps to Vintage Treatment Plant	1,796	<ul style="list-style-type: none"> - 150-hp water-lubricated turbine pump - Equipped with flow meter - Equipped with pump-to-waste - Equipped with sodium hypochlorite facilities - Equipped with hydrofluorosilicic-acid facilities

#	Sources	PS Code	Status	Pressure ¹ (psi)	Capacity ² (gpm)	Comments
12	Vintage Park 03	3410017-017	Active	Pumps to Vintage Treatment Plant	1,507	<ul style="list-style-type: none"> - 50-hp water-lubricated turbine pump - Equipped with blind flange to distribution system. - Equipped with emergency electrical power connection port - Equipped with flow meter - Equipped with pump-to-waste - Equipped with sodium hypochlorite facilities - Equipped with hydrofluorosilicic-acid facilities
13	Wilbur Way 02	3410017-018	Active	Pumps to Parksite Treatment Plant	900	<ul style="list-style-type: none"> - 100-hp oil-lubricated turbine pump - Equipped with flow meter - Equipped with pump-to-waste
14	Countryside Well 01	3410017-021	Active	Pumps to Countryside Treatment Plant	1,090	<ul style="list-style-type: none"> - 100-hp submersible turbine pump - Equipped with flow meter - Equipped with pump-to-waste
15	Countryside Well 02	3410017-022	Active	Pumps to Countryside Treatment Plant	1,500	<ul style="list-style-type: none"> - 125-hp submersible turbine pump - Equipped with flow meter - Equipped with pump-to-waste
16	Auberry Well	3410017-023	Active	Pumps to Countryside Treatment Plant	930	<ul style="list-style-type: none"> - 100-hp submersible turbine pump - Equipped with flow meter - Pump-to-waste at the well
17	Park Site 02	3410017-024	Active	Pumps to Parksite Treatment Plant	1,939	<ul style="list-style-type: none"> - 125-hp water-lubricated turbine pump - Equipped with magnetic flow meter - Pump-to-waste through well
18	Power Inn Well	3410017-025	Active	Pumps to Countryside Treatment Plant	2,800	<ul style="list-style-type: none"> - 125-hp water-lubricated turbine pump - Equipped with flow meter - Equipped with pump-to-waste
19	Hemingway Well	3410017-026	Active	Pumps to Parksite Treatment Plant	1,950	<ul style="list-style-type: none"> - 150-hp water-lubricated turbine pump - Equipped with flow meter - Equipped with pump-to-waste - Equipped with generator connection port
20	"A Parkway" Booster Station (City of Sacramento PWS# 3410020)	3410017-031	Active	--	6,000	Three 60-hp booster pumps
Total Capacity (gpm)					28,508	
Other interties						
21	City of Sacramento (PWS# 3410020)	--	Closed	--	2,070 ³	Sizes: 4", 6", 8"

#	Sources	PS Code	Status	Pressure ¹ (psi)	Capacity ² (gpm)	Comments
22	County of Sacramento – Vineyard (PWS# 3410029)	--	Closed	--	15,875 ³	Sizes: 12", 12", 24"
23	Fruitridge Vista Water Co. (PWS# 3410023)	--	Closed	--	1,175 ³	Sizes: 8"
24	Parkway Water District (PWS# 3410017)	--	Closed	--	2,350 ³	Sizes: 8", 8"

NOTES:

¹ Pressure range is reported operation pressure at well site.

² Source Capacity is reported at operation pressure. Source capacity at 30 psi may be higher.

³ Capacity is estimated at average flow speed of 7.5 foot/sec.

C. SOURCE CAPACITY ANALYSIS

California Code of Regulations, Title 22, Chapter 16, Section 64554: New and Existing Source Capacity

Adequacy of source capacity

Current available source capacity: 28,508-GPM (41 MGD)

Total available storage capacity: 6.5 MG

Maximum Day Demand: 18,578-GPM (27 MGD)

Peak hour Demand: 27,867-GPM (1.7 MG in 4 hours)

Discussion and Appraisal: Per section 64554 of Chapter 16, California Waterworks Standards, a public water system shall be able to meet the system's maximum day demand (MDD). In addition, for systems with 1,000 or more service connections, the system shall be able to meet four hours of peak hourly demand (PHD) with source capacity, storage capacity, and/or emergency source connections. Both the MDD and PHD requirements shall be met in the system as a whole and in each individual pressure zone.

The calculated maximum day demand is 18,578-GPM and peak hour demand is 27,867-GPM per Table 3 above. Parkway has 28,508-GPM capacity from groundwater wells and wholesaler per Table 4 above. In addition, there is 6.5 MG of storage.

D. TREATMENT

1. FLUORIDE

a. General Information

The United State Human and Health Services Department and Environmental Protection Agency recommend "optimum value of 0.7 mg/L" for fluoridation. The Division has adopted that "Public water systems practicing fluoridation are advised that they may immediately implement the CDC's recommended optimal level of 0.7 mg/L and control range of 0.6 ppm to 1.2 ppm."

Table 5 - Fluoridation System Chemical Information

Chemicals	Manufacturer	ANSI/ NSF 60 Certified
Hydrofluorosilicic Acid 23% (HFA)	Simplot Phosphates LLC	Yes

Table 6 - Distribution System Fluoride Concentration 2020 Summary

Month	Average
January	0.73
February	0.76
March	0.68
April	0.78
May	0.73
June	0.77
July	0.76
August	0.76
September	0.80
October	0.69
November	0.72
December	0.70
Yearly Average	0.74

Discussion and Appraisal: Parkway is in compliance with the United State Human and Health Services Department and Environmental Protection Agency recommend fluoride optimum value and range.

2. Chlorination

Process Description: Injection of 12.5% sodium hypochlorite solution prior to entry point to the distribution system at each source or treatment plant

Table 7 - Chlorine System Chemical Information

Chemicals	Manufacturer	ANSI/ NSF 60 Certified
Sodium Hypochlorite (12.5%)	Sierra Chemical	Yes

Table 8 - Distribution System Chlorine Concentration Summary

Year	Month	Average
2020	April	0.74
	May	0.75
	June	0.74
	July	0.72
	August	0.69
	September	0.72
	October	0.75
	November	0.72
	December	0.75
2021	January	0.75
	February	0.63
	March	0.61
	Running Annual Average (RAA):	0.71

Discussion and Appraisal: Parkway is in compliance with the §64533.5. Maximum Residual Disinfectant Levels. Running annual average of 4.0 mg/L.

3. ORGANIC CHEMICALS

a. Sky Parkway Water Treatment Plant

i. **General Information**

Treatment plant classification: Classified as a "T2" water treatment plant

Treatment method: Granular Activated Carbon (GAC) and Strong Base Anion Exchange

Treated contaminant: Tetrachloroethylene (PCE), Hexavalent chromium (Cr-VI) and PFOA and PFOS

ii. **Source water**

Source Name: Sky Parkway (Source No. 3410017-012)

iii. **Treatment Process and Operations**

General Treatment process description: The treatment train consists of two twelve-foot diameter GAC pressure filter vessels arranged in a 'dual-stage' series (lead-lag) configuration. Two twelve-foot diameter ion exchange vessels arranged in a 'dual-stage' series (lead-lag) configuration. There is also a hydropneumatic tank and bag filters on site.

Maximum filtration rate: Maximum treatment rate would be limited to the maximum well production rate of 700 gpm

Flow Control Method: Flow through the filters is based on the pumping capacity of the Sky Parkway Well.

Number of Redundant Filter Units: There are two filters in series.

Operations and Maintenance Plan:

Copy received by the Division: ☒ Yes ☐ No

Operations and Maintenance Plan: Dated March 2021.

iv. **Monitoring**

Table 9 – Sample Points

Monitoring Point	PS Code
SKY PARKWAY WELL	3410017-012
SKY PARKWAY - GAC 01 (MIDPOINT)	3410017-029
SKY PARKWAY - GAC 02 (TREATED)	3410017-030
SKY PARK - SBA-IX 01 (MIDPOINT)	3410017-046
SKY PARKWAY - SBA-IX 02 (TREATED)	3410017-047
SKY PARKWAY BLENDING	3410017-055
SKY PARKWAY TREATED XCLD	3410017-048

Table 10 - Permit condition required monitoring

Site	PS Code	Hexavalent Chromium	Total coliform/HPC	Chlorine	Permit condition #
SKY PARK - SBA-IX 01 (MIDPOINT)	3410017-046	Monthly	--	--	01-09-17-PER-014 (dd)
SKY PARKWAY - SBA-IX 02 (TREATED)	3410017-047	Quarterly	Monthly	--	01-09-17-PER-014 (x) and 01-09-17-PER-014 (dd)
SKY PARKWAY TREATED XCLD	3410017-048	--	--	Continuous	01-09-17-PER-014 (m)

Table 11 - Hexavalent chromium monitoring

Monitoring Point/Date	SKY PARKWAY WELL	SKY PARKWAY - GAC 01 (MIDPOINT)	SKY PARKWAY - GAC 02 (TREATED)	SKY PARK - SBA-IX 01 (MIDPOINT)	SKY PARKWAY - SBA-IX 02 (TREATED)	SKY PARKWAY BLENDING	SKY PARKWAY TREATED XCLD
3/17/2021	11	--	--	<1	<1	6.6	--
4/19/2021	8.1	--	--	<1	<1	6.2	--
5/11/2021	9.8	--	--	<1	<1	5.1	--

Table 12 - PFOA monitoring

Monitoring Point/Date	SKY PARKWAY WELL	SKY PARKWAY - GAC 01 (MIDPOINT)	SKY PARKWAY - GAC 02 (TREATED)	SKY PARK - SBA-IX 01 (MIDPOINT)	SKY PARKWAY - SBA-IX 02 (TREATED)	SKY PARKWAY BLENDING	SKY PARKWAY TREATED XCLD
3/17/2021	--	3.5	<2	--	--	<2	<2
4/9/2021	--	4.9	<2	--	--	<2	--
5/11/2021	6.7	4	<2	--	--	<2	--

Table 13 - PFOS monitoring

Monitoring Point/Date	SKY PARKWAY WELL	SKY PARKWAY - GAC 01 (MIDPOINT)	SKY PARKWAY - GAC 02 (TREATED)	SKY PARK - SBA-IX 01 (MIDPOINT)	SKY PARKWAY - SBA-IX 02 (TREATED)	SKY PARKWAY BLENDING	SKY PARKWAY TREATED XCLD
3/17/2021	--	4.5	<2	---	---	<2	<2
4/9/2021	--	6.1	<2	---	---	<2	---
5/11/2021	22.5	5.5	<2	---	---	<2	---

Table 13 - PCE monitoring

Monitoring Point/Date	SKY PARKWAY WELL	SKY PARKWAY - GAC 01 (MIDPOINT)	SKY PARKWAY - GAC 02 (TREATED)	SKY PARK - SBA-IX 01 (MIDPOINT)	SKY PARKWAY - SBA-IX 02 (TREATED)	SKY PARKWAY BLENDING	SKY PARKWAY TREATED XCLD
3/17/2021	2.4	---	---	---	---	---	---
4/9/2021	2.4	---	---	---	---	---	---
5/11/2021	1.7	<0.5	<0.5	---	---	<0.5	---

Table 14 - Nitrate monitoring

Monitoring Point/Date	SKY PARKWAY WELL	SKY PARKWAY - GAC 01 (MIDPOINT)	SKY PARKWAY - GAC 02 (TREATED)	SKY PARK - SBA-IX 01 (MIDPOINT)	SKY PARKWAY - SBA-IX 02 (TREATED)	SKY PARKWAY BLENDING	SKY PARKWAY TREATED XCLD
3/17/2021	4	---	4	---	---	3.9	---
4/9/2021	3.4	---	3.7	---	---	3.4	---
5/11/2021	3.4	---	3.5	---	---	3.4	---

Table 15 – Total coliform monitoring

Monitoring Point/Date	SKY PARKWAY WELL	SKY PARKWAY - GAC 01 (MIDPOINT)	SKY PARKWAY - GAC 02 (TREATED)	SKY PARK - SBA-IX 01 (MIDPOINT)	SKY PARKWAY - SBA-IX 02 (TREATED)	SKY PARKWAY BLENDING	SKY PARKWAY TREATED XCLD
3/17/2021	Absent	---	Absent	Absent	Absent	Absent	Absent
4/9/2021	Absent	---	Absent	Absent	Absent	Absent	Absent
5/11/2021	Absent	---	Absent	Absent	Absent	Absent	Absent

Table 16 – HPC monitoring

Monitoring Point/Date	SKY PARKWAY WELL	SKY PARKWAY - GAC 01 (MIDPOINT)	SKY PARKWAY - GAC 02 (TREATED)	SKY PARK - SBA-IX 01 (MIDPOINT)	SKY PARKWAY - SBA-IX 02 (TREATED)	SKY PARKWAY BLENDING	SKY PARKWAY TREATED XCLD
3/17/2021	<1	---	<1	<1	<1	<1	<1
4/9/2021	<1	---	<1	14	1	<1	<1
5/11/2021	4	---	<1	3	<1	4	<1

Discussion and Appraisal: Treated water from the Sky Parkway plant is in compliance with MCLs.

b. Southgate Well Water Cr-VI Treatment Plant

i. General Information

Treatment plant classification: The Southgate Well WTP is classified as a "T2" facility.

Treatment method: Strong Base Anion Exchange

Treated contaminant: Hexavalent chromium (Cr-VI)

ii. Source water

Raw Water Source: Groundwater wells – Southgate Well

iii. Treatment Process and Operations

General Treatment process description: The treatment train consists of two twelve-foot diameter ion exchange vessels arranged in a 'dual-stage' series (lead-lag) configuration. There is also a hydropneumatic tank and bag filters.

Maximum filtration rate: Maximum treatment rate would be limited to the maximum well production rate of 880 gpm (Table 7).

Flow Control Method: Flow through the filters is based on the pumping capacity of the Southgate Well.

Number of Redundant Filter Units: There are two filters in series

Operations and Maintenance Plan: Dated May 2017

Copy recieved by the Division:

☒ Yes ☐ No

iv. Monitoring

Table 17 – Sample Points

Monitoring Point	PS Code
SOUTHGATE WELL	3410017-013
SOUTHGATE - SBA-IX 01 (MIDPOINT)	3410017-049
SOUTHGATE - SBA-IX 02(TREATED)	3410017-050
SOUTHGATE SBA-IX BLENDING	3410017-054
SOUTHGATE WELL - TREATED XCLD	3410017-037

Table 18 - Permit condition required monitoring

Site	PS Code	Hexavalent Chromium	Total coliform/HPC	Chlorine	Permit condition #
SOUTHGATE - SBA-IX 01 (MIDPOINT)	3410017-049	Monthly	--	--	01-09-17-PER-014 (dd)
SOUTHGATE - SBA-IX 02(TREATED)	3410017-050	Quarterly	Monthly	--	01-09-17-PER-014 (x) and 01-09-17-PER-014 (dd)
SOUTHGATE WELL - TREATED XCLD	3410017-037	--	--	Continuous	01-09-17-PER-014 (m)

Table 19 - Hexavalent chromium monitoring

Monitoring Point/Date	SOUTHGATE WELL	SOUTHGATE - SBA-IX 01 (MIDPOINT)	SOUTHGATE - SBA-IX 02 (TREATED)	SOUTHGATE SBA-IX BLENDING	SOUTHGATE WELL - TREATED XCLD
3/17/2021	--	<1	<1	13	--
4/12/2021	--	<1	<1	12	--
5/11/2021	20	<1	<1	13	--

Table 20 - Nitrate monitoring

Monitoring Point/Date	SOUTHGATE WELL	SOUTHGATE - SBA-IX 01 (MIDPOINT)	SOUTHGATE - SBA-IX 02 (TREATED)	SOUTHGATE SBA-IX BLENDING	SOUTHGATE WELL - TREATED XCLD
3/17/2021	---	---	2.4	---	---
4/12/2021	---	---	1.9	---	---
5/11/2021	---	---	1.9	---	---

Table 21 - Total coliform monitoring

Monitoring Point/Date	SOUTHGATE WELL	SOUTHGATE - SBA-IX 01 (MIDPOINT)	SOUTHGATE - SBA-IX 02 (TREATED)	SOUTHGATE SBA-IX BLENDING	SOUTHGATE WELL - TREATED XCLD
3/17/2021	Absent	Absent	Absent	Absent	Absent
4/12/2021	Absent	Absent	Absent	Absent	Absent
5/11/2021	Absent	Absent	Absent	Absent	Absent

Table 22 - HPC monitoring

Monitoring Point/Date	SOUTHGATE WELL	SOUTHGATE - SBA-IX 01 (MIDPOINT)	SOUTHGATE - SBA-IX 02 (TREATED)	SOUTHGATE SBA-IX BLENDING	SOUTHGATE WELL - TREATED XCLD
3/17/2021	4	4	<1	6	<1
4/12/2021	<1	2	3	2	<1
5/11/2021	3	10	2	4	2

Discussion and Appraisal: Treated water from the Southgate WTP is in compliance with MCLs.

C. Stocker Well Water Cr VI Treatment Plant

i. General Information

Treatment plant classification: The Stocker Well WTP is classified as a "T2" facility.

Treatment method: Strong Base Anion Exchange

Treated contaminant: Hexavalent chromium (Cr-VI)

ii. Source water

Raw Water Source: Groundwater wells – Stocker Well

iii. Treatment Process and Operations

General Treatment process description: The treatment train consists of two twelve-foot diameter ion exchange vessels arranged in a 'dual-stage' series (lead-lag) configuration. There is also a hydropneumatic tank and bag filters.

Maximum filtration rate: Maximum treatment rate would be limited to the maximum well production rate of 600 gpm.

Flow Control Method: Flow through the filters is based on the pumping capacity of the Stocker Well.

Number of Redundant Filter Units: There are two filters in series

Operations and Maintenance Plan: Dated October 2016

Copy received by the Division: ☒ Yes ☐ No

iv. Monitoring

Table 23 – Sample Points

Monitoring Point	PS Code
STOCKER WELL	3410017-014
STOCKER - SBA-IX 01 (MIDPOINT)	3410017-051
STOCKER - SBA-IX 02 (TREATED)	3410017-052
STOCKER SBA-IX BLENDING	3410017-053
STOCKER WELL - TREATED XCLD	3410017-036

Table 24 - Permit condition required monitoring

Site	PS Code	Hexavalent Chromium	Total coliform/ HPC	Chlorine	Permit condition #
STOCKER - SBA-IX 01 (MIDPOINT)	3410017-051	Monthly	---	---	01-09-17-PER-014 (dd)
STOCKER - SBA-IX 02 (TREATED)	3410017-052	Quarterly	Monthly	---	01-09-17-PER-014 (x) and 01-09-17-PER-014 (dd)
STOCKER WELL - TREATED XCLD	3410017-036	---	---	Continuous	01-09-17-PER-014 (m)

Table 25 - Hexavalent chromium monitoring

Monitoring Point/Date	STOCKER WELL	STOCKER - SBA-IX 01 (MIDPOINT)	STOCKER - SBA-IX 02 (TREATED)	STOCKER SBA-IX BLENDING	STOCKER WELL - TREATED XCLD	MCL
3/17/2021	---	1.2	<1	5.6	---	N/A*
4/12/2021	---	1.8	<1	5.3	---	
5/11/2021	10	1.6	<1	4.5	---	

*MCL of 10 ug/L rescinded September 11, 2017.

Table 26 - Nitrate monitoring

Monitoring Point/Date	STOCKER WELL	STOCKER - SBA-IX 01 (MIDPOINT)	STOCKER - SBA-IX 02 (TREATED)	STOCKER SBA-IX BLENDING	STOCKER WELL - TREATED XCLD	MCL
3/17/2021	---	---	2.8	---	---	10
4/12/2021	---	---	2.6	---	---	
5/11/2021	---	---	1.9	---	---	

Table 27 - Total coliform monitoring

Monitoring Point/Date	STOCKER WELL	STOCKER - SBA-IX 01 (MIDPOINT)	STOCKER - SBA-IX 02 (TREATED)	STOCKER SBA-IX BLENDING	STOCKER WELL - TREATED XCLD
3/17/2021	Absent	Absent	Absent	Absent	Absent
4/12/2021	Absent	Absent	Absent	Absent	Absent
5/11/2021	Absent	Absent	Absent	Absent	Absent

Table 28 – HPC monitoring

Monitoring Point/Date	STOCKER WELL	STOCKER - SBA-IX 01 (MIDPOINT)	STOCKER - SBA-IX 02 (TREATED)	STOCKER SBA-IX BLENDING	STOCKER WELL - TREATED XCLD
3/17/2021	6	5	10	5	<1
4/12/2021	<1	2	9	4	<1
5/11/2021	3	10	2	4	2

Discussion and Appraisal: Treated water from the Stocker WTP is in compliance with MCLs.

d. Countryside Water Treatment Plant

i. General Information

Treatment plant classification: Classified as a "T2" facility.

Treatment: Aeration for methane removal, manganese oxidation/filtration, fluoridation, and chlorination.

ii. Source water

Raw Water Source: Countryside Well 01 (Source No. 3410017-021), Countryside Well 2 (Source No. 3410017-022), Auberry Well (Source No. 3410017-023), and Power Inn Well (Source No. 3410017-025).

iii. Treatment Process and Operations

Aeration treatment train: The Countryside WTP aeration train consists of two parallel operated media-packed counter-flow air stripping towers. Each tower is 12-ft in diameter, 18 feet tall, and equipped with 15,600-cfm blowers. Water enters each tower from the top and air is blown from the bottom. Aerated water drains into one underground sump located under the aeration towers. According to the submitted data, the aeration treatment train total capacity is 7,600 gpm, and the two towers are designed for parallel or individual operation. Each tower has its dedicated sump, which includes two water pumps (1 + 1) – also referred to as 'filter feed' pumps. Filter feed pumps for each tower are: a 40-hp (1,900 gpm) and a 60-hp (2,600 gpm) vertical turbine pump. The filter feed pumps deliver water

from the aeration tower basin to the treatment plant reaction vessels. The total pumping capacity of the filter feed pumps is approximately 9,000 gpm, which exceeds the combined source capacity of the groundwater wells that are treated in the Countryside WTP.

Chemical oxidation treatment train: Sodium hypochlorite (12.5 % solution) and hydrofluorosilicic acid (23% solution) are injected inline upstream of a static mixer and reaction vessels. The capacity of each reaction vessel is 12,520 gallons. There are two reaction vessels in parallel operation. Based on the influent flow into the aeration towers and operation of the aeration basin pumps, the detention time in each vessel ranges from 1.4 minutes (all pumps in operation and one vessel in service) to 13 minutes (one 1,900-gpm pump in operation and both vessels in service). There is a bypass line that diverts the flow directly to the pressure filtration units after chemical injection.

Pressure filtration treatment train: After chemical injection and reaction vessels, the partially treated water enters the filtration treatment train – five pressure filtration units in parallel operation. Five pressure filters remove the oxidized inorganic chemicals out of the water prior to storages, and distribution. Reportedly, each filter has approximately 264 square feet of surface area. Based on information submitted in the Operations and Maintenance Manual, the filter media consists of:

Anthracite; 10-inches deep, effective size between 0.80 – 0.90 mm
Sand; 18-inches deep, effective size between 0.45 – 0.55 mm
Gravel; 3-inches deep, effective size between 1/8 – 1/4 inches
3-inches deep, effective size between 3/4 – 3/8 inches
6-inches deep, effective size between 1 1/2 – 3/4 inches

Flow Control Method: Filter loading rate is controlled via 'effluent' valves installed on each filter vessel.

Operations and Maintenance Plan: Dated May 2012

Copy received by the Division:

☒ Yes ☐ No

iv. Backwash Operations

Backwash process description: The filters can be backwashed either manually or automatically. To ensure optimum treatment, each filter is taken out of service for backwash based on either individual filter headloss or filter operation time, which ever happens first. During backwash process, one filter is backwashed while other filters remain in service. The backwash rate is approximately twice the filtration rate. Backwash water is stored in a 500,000-gallon welded steel tank. The settled water from backwash water tank is returned to the filter influent line before chemical injection. The settled sludge is hauled away in tankers.

Backwashing frequency and/or initiation requirements: The backwash frequency depends on the differential pressure on each filter cell and/or filter operation time. The backwashing of filters can also be initiated manually as needed. Reportedly, operators are present during backwash process.

Backwash reclamation process description: Prior to start of each backwash process, the settled water in the backwash water settling/recovery tank is pumped to the filters for reuse. Settled backwash water is pumped from the backwash holding tank to a point after aeration towers – reclaimed backwash water is not reintroduced at the WTP headworks.

Coagulant: CalChem CC2205 is used to enhance backwash particle settling.

Percent backwash water recovery: Reportedly, the percent of water recovery varies by the number of source wells that are active; however, approximately 65% – 80% of the backwashed water in the tank is pumped for reuse.

Backwash reclamation injection point: Reclaimed water is injected into the treatment train between aeration and filtration processes. Settled water from the filtration backwash water tank is pumped to the filter influent point using a 10-hp pump.

v. Monitoring

Table 29 – Monitoring Points

Monitoring Point	PS Code
AUBERRY	3410017-023
POWER INN	3410017-025
COUNTRYSIDE WELL 01	3410017-021
COUNTRYSIDE WELL 02	3410017-022
COUNTRYSIDE WTP - BLENDED INFLUENT	3410017-043
COUNTRYSIDE WTP - TREATED	3410017-032

Table 30 – Max monthly iron monitoring

Monitoring Point/Date	COUNTRYSIDE WTP - BLENDED INFLUENT	COUNTRYSIDE WTP - TREATED	SMCL
March 2021	150	<100	300
April 2021	430	<100	
May 2021	200	<100	

Table 31 – Max monthly manganese monitoring

Monitoring Point/Date	COUNTRYSIDE WTP - BLENDED INFLUENT	COUNTRYSIDE WTP - TREATED	SMCL
March 2021	214	<20	50
April 2021	197	<20	
May 2021	204	<20	

Table 32 – Max monthly arsenic monitoring

Monitoring Point/Date	COUNTRYSIDE WTP - BLENDED INFLUENT	COUNTRYSIDE WTP - TREATED	MCL
March 2021	8	7	10
April 2021	8	8	
May 2021	8	8	

Discussion and Appraisal: Treated water from the Countryside WTP is in compliance with MCLs.

e. Parksite Water Treatment Plant

i. General Information

Treatment plant classification: Classified as a "T3" facility.

Treatment method: Aeration for methane, manganese oxidation/filtration, arsenic blending fluoridation, and chlorination

Sources: Gerber Rd. Well (Source No. 3410017-006), Park Site 01 Well (Source No. 3410017-009), Wilbur Well 02 (Source No. 3410017-018), Park Site 02 Well (Source No. 3410017-024), Hemingway Well (Source No. 3410017-026).

ii. Treatment Process and Operations

General treatment process description:

After aeration for methane removal, water is treated with sodium hypochlorite and hydrofluorosilicic acid. Thereafter, water enters six 12,500-gallon pressure filtration units. Treated water is stored in two 1.0 MG welded steel storage tanks. In addition to the finished water storage tanks there are two 0.1 MG backwash holding tanks. Treated water is delivered to the system via one booster pump station.

Aeration treatment train: The Parksite WTP aeration train consists of two parallel operated media-packed counter-flow air stripping towers. Each tower is 10.5-ft in diameter, 18 feet tall, and equipped with 25,000-cfm blowers. Water enters each tower from the top and air is blown from the bottom. Aerated water drains into one underground sump located under the aeration towers. According to the submitted data, the aeration treatment train capacity is approximately 6,000 gpm, which is less than the combined source capacity of the groundwater wells that are treated in the Parksite WTP. The two towers are designed for parallel or individual operation – 3,000 gpm each. Aerated water sump is equipped with two 75-hp water pumps (1 + 1) – also referred to as 'filter feed' pumps. The filter feed pumps deliver water from the aeration tower basin to the treatment plant pressure filter vessels. Each pump has a capacity of 2,000 gpm. The total pumping capacity of the filter feed pump is approximately 4,000 gpm, which is less than the combined source capacity of the groundwater wells that are treated in the Parksite WTP.

Chemical oxidation treatment train: Sodium hypo-chlorite (12.5 % solution) and hydrofluorosilicic acid (23% solution) are injected inline upstream of a static mixer and pressure filtration units. Once chemicals are injected to the pipeline, the chemically treated water enters the pressure filter vessels.

Pressure filtration treatment train: After chemical injection, partially treated water enters the treatment plant pressure filters (typically 6 ft. x 25 ft. each). Six pressure filters filter the oxidized manganese, iron, and arsenic out of the solution prior to storage, and distribution. Reportedly, each filter has an estimated 150 square feet of surface area. Based on submitted information filter media consists of:

<u>Anthracite:</u>	<u>10-inches deep, effective size between 0.80 – 0.90 mm</u>
<u>Sand:</u>	<u>14-inches deep, effective size between 0.45 – 0.55 mm</u>
<u>Gravel:</u>	<u>6-inches deep, effective size between 1/8 – 1/4 inches</u>
	<u>4-inches deep, effective size between 3/4 – 3/8 inches</u>
	<u>6-inches deep, effective size between 1 1/2 – 3/4 inches</u>

Flow Control Method: Filter loading rate is controlled via 'effluent' valves installed on each filter cell.

Operations and Maintenance Plan: Dated May 2012

Copy reviewed by the Division: ☒ Yes ☐ No

iii. Backwash Operations

Backwash process description: The filters can be backwashed either manually or automatically. To ensure optimum treatment, each filter is taken out of service for backwash based on either individual filter headloss or filter operation time, whichever happens first. During backwash process, one filter is backwashed while other filters remain in service. The backwash filtration rate is approximately 12 gallons per minute per square foot (nearly three times the filtration rate). Backwash water is stored in

two 100,000-gallon welded steel tanks. The settled water from backwash water tank is returned to the filters for filtration and use, and the settled sludge is hauled away in tankers.

Backwashing frequency and/or initiation requirements: The backwash frequency depends on the differential pressure of each filter cell or filter operation time. The backwashing can also be manually initiated. Reportedly, operators are present during backwash process.

Backwash reclamation process description: Prior to start of each backwash process, the settled water in the backwash water settling/recovery tank is pumped to the filters for reuse. Settled backwash water is pumped from the backwash holding tank to downstream of aeration towers – reclaimed backwash water is not reintroduced at the WTP headworks.

Coagulant: CalChem CC2205 is used to enhance backwash particle settling.

Percent backwash water recovery: Reportedly, percent water recovery varies by the number of source wells that are active; however, approximately 65% – 80% of the backwashed water in the tank is returned for reuse.

Backwash reclamation injection point: Reclaimed water is injected into the treatment train downstream of aeration and upstream of filtration processes. Settled water from the filtration backwash water tank is pumped using one 10-hp powered pump.

iv. Monitoring

Table 33 – Monitoring Points

Monitoring Point	PS Code
HEMINGWAY	3410017-026
GERBER RD.	3410017-006
WILBUR WAY 02	3410017-018
PARK SITE 01 - RAW	3410017-009
PARK SITE 02	3410017-024
PARKSITE WTP - BLENDED INFLUENT	3410017-042
PARKSITE WTP - TREATED	3410017-034

Table 34 – Max monthly iron monitoring

Monitoring Point/Date	PARKSITE WTP - BLENDED INFLUENT	PARKSITE WTP - TREATED	SMCL
March 2021	150	<100	300
April 2021	430	<100	
May 2021	200	<100	

Table 35 – Max monthly manganese monitoring

Monitoring Point/Date	PARKSITE WTP - BLENDED INFLUENT	PARKSITE WTP - TREATED	SMCL
March 2021	214	<20	50
April 2021	197	<20	
May 2021	204	<20	

Table 36 – Max monthly arsenic monitoring

Monitoring Point/Date	PARKSITE WTP - BLENDED INFLUENT	PARKSITE WTP - TREATED	MCL
March 2021	8	7	10
April 2021	8	8	
May 2021	8	8	

Discussion and Appraisal: Treated water from the Parksite WTP is in compliance with MCLs.

f. Vintage Park Water Treatment Plant

i. General Information

Treatment plant classification: Classified as a "T2" facility.

Treatment method: Manganese oxidation/filtration, fluoridation, and chlorination

Treatment plant process diagram on file: ☒ Yes ☐ No

Treatment plant data sheets on file: ☒ Yes ☐ No

Operations and Maintenance Plan: Dated May 2012

Copy reviewed by Division: ☒ Yes ☐ No

ii. Source water

Raw Water Source: Groundwater wells – Vintage Park 02 Well (Source No. 3410017-016), Vintage Park 03 Well (Source No. 3410017-017).

iii. Treatment Process and Operations

General treatment process description:

First, raw groundwater is treated with sodium hypochlorite and hydrofluorosilicic acid. Then, chemically treated water enters two 10,000-gallon 'reaction vessels'. Thereafter, water is filtered using three 10,000-gallon pressure filtration units. Treated water is stored in one 3.0 MG welded steel storage tank. In addition to the 1.5-MG storage tank a 40,000-gallon tank stores backwash water. Treated water is delivered to the system via one booster pump station.

Chemical oxidation treatment train: Sodium hypochlorite (12.5 % solution) and hydrofluorosilicic acid (23% solution) are injected inline upstream of the reaction vessels. There are two 10,000-gallon reaction vessels that operate in series. Based on the influent flow into the treatment plant, and operation of the source raw water pumps, the detention time in each vessel ranges from 6 minutes

(both pumps in operation at 3,300 gpm) to 13 minutes (Vintage Park 03 Well (Source No. 3410017-017) in operation at 1,500 gpm).

Pressure filtration treatment train: After chemical injection and reaction vessels, the partially treated water enters the treatment plant pressure filters. Three pressure filters filter the oxidized manganese out of the solution prior to storages and distribution. Reportedly, each filter has an estimated 150 square feet of surface area. Filtronics Inc. has claimed that the filter media information is proprietary and has not provided this information in the filter data sheet; however, it has been reported that the media consist of seven layers. Based on submitted information filter media is Model FH-16 Electromedia consisting of:

Bottom Layer: 14,000 pounds of 'S-200'
Second Layer: 5,500 pounds of 'S-202'
Third Layer: 4,600 pounds of 'T-100'
Fourth Layer: 1,760 pounds of 'T-206'
Fifth Layer: 16,260 pounds of 'T-230'
Sixth Layer: 9,215 pounds of 'T-407'
Seventh Layer: 4,400 pounds of anthracite

Flow Control Method: Filter loading rate is controlled via 'effluent' valves installed on each filter cell.

iv. Backwash Operations

Backwash process description: Reportedly, to ensure optimum treatment, each filter is taken out of service for backwash after 8 hours of operation. During backwash process, one filter is backwashed while other filters remain in service. The backwash filtration rate is approximately 20 gallons per minute per square foot. Backwash water is stored in a 350,000-gallon epoxy-coated steel tank. The settled water from backwash water tank is returned to the filters for filtration and use, and the settled sludge is hauled away in tankers.

Backwashing frequency and/or initiation requirements: The backwash frequency depends on the differential pressure of each filter or filter run time. Reportedly, operators are present during backwash process.

Backwash reclamation process description: Prior to start of each backwash process, the settled water in the backwash water settling/recovery tank is pumped to the filters for reuse. Settled backwash water is pumped from the backwash holding tank.

Coagulant: CalChem CC2205 is used to enhance backwash particle settling.

Percent backwash water recovery: Reportedly, percent water recovery varies by the number of source wells that are active; however, approximately 75% – 85% of the backwashed water, which is settled in the backwash settling tank, is pumped for reuse.

Backwash reclamation injection point: Reclaimed water is injected into the treatment train before filtration processes. Settled water from the filtration backwash water tank is pumped to the filter influent point using two 15-hp powered pumps (1 + 1 standby).

v. Monitoring

Table 37 – Monitoring points

Monitoring Point	PS Code
VINTAGE PARK 02	3410017-016
VINTAGE PARK 03	3410017-017
VINTAGE PARK WTP - BLENDED INFLUENT	3410017-044
VINTAGE PARK WTP - TREATED	3410017-033

Table 38 – Max monthly iron monitoring

Monitoring Point/Date	VINTAGE PARK WTP - BLENDED INFLUENT	VINTAGE PARK WTP - TREATED	SMCL
March 2021	<100	<100	300
April 2021	<100	<100	
May 2021		<100	

Table 39 – Max monthly manganese monitoring

Monitoring Point/Date	VINTAGE PARK WTP - BLENDED INFLUENT	VINTAGE PARK WTP - TREATED	SMCL
March 2021	115	<20	50
April 2021	92	<20	
May 2021	92	<20	

Table 40 – Max monthly arsenic monitoring

Monitoring Point/Date	VINTAGE PARK WTP - BLENDED INFLUENT	VINTAGE PARK WTP - TREATED	MCL
March 2021	<2	<2	10
April 2021	<2	<2	
May 2021	<2	<2	

Discussion and Appraisal: Treated water from the Vintage WTP is in compliance with MCLs.

E. RESERVOIRS AND STORAGE TANKS

California Code of Regulations, Title 22, Chapter 16, Article 6: Distribution Reservoirs

Reservoirs and Storage Tanks: The Water System has four potable storage reservoirs and four backwash water storage reservoirs as stated in Table 21.

Table 41 - Reservoir and Storage Tank Summary

Name	Type	Capacity (MG)	Year Built	Last Inspection	Last Cleaning	Re-lined or Re-coated
Countryside WTP Storage Tank	Welded Steel	3.00	1987	2017	2017	2002
Countryside WTP Backwash Tank	Welded Steel	0.50	1983	2016	2017	2011
Parkside WTP Storage Tank 1	Concrete	1.00	1980	2016	2014	1980
Parkside WTP Storage Tank 2	Welded Steel	1.00	1988	2017	2016	2004
Parkside WTP Backwash Tank 1	Welded Steel	0.10	1980	2016	2016	2011
Parkside WTP Reclaimed Tank 2	Welded Steel	0.11	1998	2016	2016	1998
Vintage Park WTP Storage Tank	Welded Steel	1.50	1991	2014	2014	2008
Vintage Park WTP Backwash Tank	Welded Steel	0.40	1991	2016	2016	1991
		6.50				

Discussion and Appraisal: The storage is 6.50 million gallons.

F. DISTRIBUTION SYSTEM

California Code of Regulations, Title 22, Chapter 16: California Waterworks Standards

1. DISTRIBUTION SYSTEM INFORMATION

- a. Treatment operator certification requirements:** According to Section 64413.1, Article 2, Chapter 15, Division 4, Title 22 of the California Code of Regulations, the treatment system has been classified as a "T3" water system.

Certified Operators: The list of all Certified Treatment Operators was provided in the electronic annual report.

- b. Distribution operator certification requirements:** According to Table 64413.3-A in Section 64413.3, Article 2, Chapter 15, Division 4, Title 22 of CCR, and based on the number of service connections, the Parkway water distribution system is classified as "D3" distribution system.

Certified Operators: A list of all Certified Distribution System Operators was submitted in the electronic annual report

2. PRESSURE ZONES

Pressure Zones: The Water System's drinking water distribution system has one pressure zone listed below.

Table 42- Distribution Pressure Zones Summary

Pressure Zone Name	Typical Pressure Range (psi)	Comments
Parkway Zone	60 - 80	Main distribution system, except a small area known as 'Florin Zone'.

3. BOOSTER PUMP AND PRESSURE REDUCING STATIONS

California Code of Regulations, Title 22, Chapter 16, Article 4: Pumping Stations

Booster Pump and Pressure reducing Stations: Pump stations summary are tabulated in Table 23.

Table 43 - Summary of Booster Stations

Station Name	Capacity (gpm)	From Zone	To Zone	No. of Pumps	Pump Power (hp)	Comments
Vintage Park WTP	6,000	Vintage Park WTP	Main Parkway	3	Three @ 125	
Parksite WTP	6,000	Parksite WTP	Main Parkway	5	Five @ 75	
Countryside WTP	7,500	Countryside WTP	Main Parkway	6	One @ 20 One @ 50 Three @ 125	
A Parkway	6,000	City of Sacramento	Main Parkway	3	Three @ 60	
Total	25,500					

4. WATER MAINS AND SERVICE CONNECTIONS

California Code of Regulations, Title 22, Chapter 16, Article 4: Materials and Installation of Water Mains and Appurtenances

Water Mains and Service Connections: The distribution system piping material is tabulated below.

Table 44 - Summary of Water Mains

Pipeline Material	Percent Of Distribution Pipe System Composed Of The Materials Selected Above	Average Age (In Years)
Plastic	37.8	47.9
Steel	0	0
Cast Iron	0.1	97.5
Galvanized Iron	0	0
Ductile Iron	5.1	48.5
Cement Concrete	0	0
Asbestos Cement	56.4	63.5
other:	0.6	121

5. DISTRIBUTION SYSTEMS PROBLEMS

Distribution System Problems: Water System water distribution system problems are tabulated below.

Table 45 - Summary of Distribution System Problems

Year	Type of Problem				Total
	Service Connection Breaks/ Leaks	Main Breaks/Leaks	Water Outages	Boil Water Orders	
2017	32	4	0	0	36
2018	38	12	0	0	50
2019	38	9	0	0	47

G. WATER QUALITY AND MONITORIN

1. BACTERIOLOGICAL MONITORING

California Code of Regulations, Title 22, Chapter 15, Article 3: Bacteriological Quality

Program Description: Based on the population served (48,738) and the number of service connections (14,779) from the 2019 eAR and according to Table 64423-A in Section 64423, Article 3, Chapter d15, Division 4, Title 22 of the California Code of Regulations, the water system is required to take at least 50 samples per month.

Table 46 - Table 64423-A in Section 64423

Monthly Population Served	Service Connections	Minimum Number Of Samples Per Month
33,001 to 41,000	11,801 to 14,600	40 per week
41,001 to 50,000	14,601 to 17,900	50 per week
50,001 to 59,000	17,901 to 21,100	60 per week

The water system Bacteriological Sample Siting Plan (BSSP) is dated July 1, 2021. Samples are currently sent to CLS for analysis. Summary reports and lab results are sent to the Division by the 10th of the following month.

Bacteriological Sample Siting Plan (BSSP)

Copy received by the Division: ☒ Yes ☐ No

Sampler(s): Operators

Laboratory: CLS Phone: (916) 638 7301 ELAP Cert. No.: 1222

Factor controlling sample size: ☒ Population ☒ Service Connections

Number of samples required: 50 per month

Number of samples taken: 13 per week (min. 52 per

month)

Raw water sampling frequency: Quarterly

Table 47 – Distribution Total Coliform Monitoring

Month	Number Of Distribution Total Coliform Samples Collected	Number Of Distribution Positives	Monthly Distribution Chlorine Average (mg/L)
June 2020	60	0	0.74
July 2020	48	0	0.72
August 2020	60	0	0.69
Sep 2020	48	0	0.72
Oct 2020	48	0	0.75
Nov 2020	60	0	0.72
Dec 2020	48	0	0.75
Jan 2021	48	0	0.75
Feb 2021	48	0	0.63
Mar 2021	60	0	0.61
April 2021	48	0	QTR RT
May 2021	48	0	QTR RT

QTR RT = quarterly reporting

Discussion and appraisal: Bacteriological monitoring is in compliance and follows the BSSP.

1. Summary of Raw Water Bacteriological Sampling: Monitoring is required quarterly in accordance with §64421, General Requirements.:

"§64421. General Requirements. (b) In addition to the bacteriological monitoring requirements in Sections 64423, 64424, 64425, and 64426.9, a public water system shall perform special purpose bacteriological monitoring as follows: (2) For a groundwater (not GWUDI) source that is treated with a primary or residual disinfectant on a continuous basis and is not monitored pursuant to Section 64654.8(b)(1)(B): (A) A raw water sample shall be collected each calendar quarter, with samples collected during the same month (first, second, or third) of each calendar quarter;"

Table 48 – Source coliform monitoring

Well Name	Status (On/Off)	Sample Time & Date	Total Coliforms (P/A, CFU or MPN)	E. coli (P/A, CFU or MPN)
Auberry	ON	2/8/21 1:55 PM	Absent	Absent
Briggs	ON	2/10/21 10:05 AM	Absent	Absent
Countryside 1	ON	2/8/21 1:30 PM	Present	Absent
Countryside 1	ON	2/10/21 12:30 PM	<1	<1
Gerber	OFF	2/10/21 10:05 AM	Absent	Absent
Hemingway	ON	2/10/21 1:55 PM	Absent	Absent
Lippi	OFF	2/16/21 1:50 PM	Absent	Absent
Parksite 1	ON	2/10/21 1:30 PM	Absent	Absent
Parksite 2	ON	2/10/21 1:35 PM	Absent	Absent
Rockhurst	ON	2/10/21 11:15 AM	Absent	Absent
Vintage 1	OFF	2/10/21 9:15 AM	Absent	Absent
Vintage 2	ON	2/10/21 7:00 AM	Absent	Absent
Vintage 3	ON	2/10/21 7:30 AM	Absent	Absent
Wilbur 2	ON	2/10/21 2:10 PM	Absent	Absent
Sky Parkway	ON	1/13/21 8:45 AM	Absent	Absent
Sky Parkway	ON	2/17/21 10:45 AM	Absent	Absent
Sky Parkway	ON	3/17/21 12:15 PM	Absent	Absent
Southgate	ON	1/14/21 11:40 AM	Absent	Absent
Southgate	ON	2/16/21 12:25 PM	Absent	Absent
Southgate	ON	3/17/21 11:20 AM	Absent	Absent
Stocker	ON	1/13/21 10:20 AM	Absent	Absent
Stocker	ON	2/10/21 8:50 AM	Absent	Absent
Stocker	ON	3/15/21 10:15 AM	Absent	Absent
Countryside 2	ON	2/8/21 1:45 PM	Absent	Absent
Conrad	OFF			
Elsie	OFF			
Power Inn	OFF			

2. CHEMICAL MONITORING

California Code of Regulations, Title 22, Chapter 15, Articles 4 through 17 inclusive: Inorganic Chemicals, Radioactivity, Organic Chemicals, Secondary Drinking Water Standards, et al.

Program Description: Parkway monitors for chemicals at the raw water sample point in accordance with the frequencies listed in the tables below.

Laboratory: BSK Associates
Inorganic Chemicals

Phone: (559) 497-2888 **ELAP No.:** 1180

Table 49 - Inorganic Chemicals Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Comments
Auberry Well	Triennially	8/14/2018	2021	
Briggs Well	Triennially	8/18/2018	2021	
Countryside Well 01	Triennially	8/14/2018	2021	
Countryside Well 02	Triennially	8/14/2018	2021	
Elsie Avenue Well	Every Nine Years	7/20/2015	2024	Standby
Gerber Drive Well	Triennially	8/9/2018	2021	Arsenic ¹ = 16 ug/L
Hemingway Well	Triennially	8/15/2018	2021	
Lippi Parkway Well	Triennially	8/14/2018	2021	
Park Site 01	Triennially	8/15/2018	2021	
Park Site 02	Triennially	8/15/2018	2021	
Power Inn Well	Triennially	8/14/2018	2021	
Rockhurst Well	Triennially	8/14/2018	2021	
Sky Parkway Well	Triennially	8/12/2020	2023	
Southgate Well	Triennially	8/14/2018	2021	
Stocker Well	Triennially	8/12/2020	2023	
Vintage Park 01	Triennially	8/14/2018	2021	
Vintage Park 02	Triennially	8/9/2018	2021	
Vintage Park 03	Triennially	8/9/2018	2021	
Wilbur Way 02	Triennially	8/15/2018	2021	

Discussion and Appraisal: Inorganic chemicals results not above, at, or trending near MCLs. Arsenic for Gerber Drive Well is blended at Countyside WTP. Arsenic MCL is 10 ug/L.

¹Monitored weekly at the blended sample point in accordance with Gerber Well Blending Process O&M Plan Dated December 2015. Source water monitoring triggered when raw blended sample exceeds 80% of MCL (8 ug/L).

Table 50 - Fluoride Chemicals Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Comments
Auberry Well	Annually	8/17/2020	2021	
Briggs Well	Annually	8/5/2020	2021	
Countryside Well 01	Annually	8/17/2020	2021	
Countryside Well 02	Annually	8/17/2020	2021	
Elsie Avenue Well	Every nine years	5/1/2018	2027	Standby
Gerber Drive Well	Annually	8/12/2020	2021	
Hemingway Well	Annually	8/12/2020	2021	
Lippi Parkway Well	Annually	11/16/2020	2021	
Park Site 01	Annually	8/12/2020	2021	
Park Site 02	Annually	8/12/2020	2021	
Power Inn Well	Annually	8/13/2019	Prior to returning to service	
Rockhurst Well	Annually	8/5/2020	2021	
Sky Parkway Well	Annually	8/12/2020	2021	
Southgate Well	Annually	8/12/2020	2021	
Stocker Well	Annually	8/12/2020	2021	
Vintage Park 01	Annually	8/10/2020	2021	
Vintage Park 02	Annually	8/10/2020	2021	
Vintage Park 03	Annually	8/10/2020	2021	
Wilbur Way 02	Annually	8/12/2020	2021	

Table 51 – Perchlorate Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Comments
Auberry Well	Triennially	8/14/2018	2021	
Briggs Well	Triennially	8/8/2018	2021	
Countryside Well 01	Triennially	8/14/2018	2021	
Countryside Well 02	Triennially	8/14/2018	2021	
Elsie Avenue Well	Every Nine Years	5/1/2018	2027	Standby
Gerber Drive Well	Triennially	8/9/2018	2021	
Hemingway Well	Triennially	8/15/2018	2021	
Lippi Parkway Well	Triennially	8/14/2018	2021	
Park Site 01	Triennially	8/15/2018	2021	
Park Site 02	Triennially	8/15/2018	2021	
Power Inn Well	Triennially	8/14/2018	2021	
Rockhurst Well	Triennially	8/14/2018	2021	
Sky Parkway Well	Triennially	8/12/2020	2023	
Southgate Well	Triennially	8/14/2018	2021	
Stocker Well	Triennially	8/12/2020	2023	
Vintage Park 01	Triennially	8/14/2018	2021	
Vintage Park 02	Triennially	8/9/2018	2021	
Vintage Park 03	Triennially	8/9/2018	2021	
Wilbur Way 02	Triennially	8/15/2018	2021	

Discussion and Appraisal: Perchlorate results not above, at, or trending near MCLs.

Table 52 - Asbestos Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Comments
Auberry Well	Every Nine Years	2/8/2021	2030	
Briggs Well	Every Nine Years	2/10/2021	2030	
Countryside Well 01	Every Nine Years	2/8/2021	2030	
Countryside Well 02	Every Nine Years	2/8/2021	2030	
Elsie Avenue Well	Every Nine Years	9/11/2012	2021	Standby
Gerber Drive Well	Every Nine Years	2/10/2021	2030	
Hemingway Well	Every Nine Years	2/10/2021	2030	
Lippi Parkway Well	Every Nine Years	9/12/2012	2021	
Park Site 01	Every Nine Years	1/17/2017	2026	
Park Site 02	Every Nine Years	2/10/2021	2030	
Power Inn Well	Every Nine Years	8/28/2012	2021	
Rockhurst Well	Every Nine Years	2/10/2021	2030	
Sky Parkway Well	Every Nine Years	2/17/2021	2030	
Southgate Well	Every Nine Years	2/16/2021	2030	
Stocker Well	Every Nine Years	2/10/2021	2030	
Vintage Park 01	Every Nine Years	2/10/2021	2030	
Vintage Park 02	Every Nine Years	2/10/2021	2030	
Vintage Park 03	Every Nine Years	1/17/2017	2026	
Wilbur Way 02	Every Nine Years	2/10/2021	2030	
Distribution system	Every Nine Years	9/19/2012	2021	Locations: 7921 East Parkway 4901 North Parkway

Discussion and Appraisal: No chemicals sampled above, at, or trending near MCLs. Per 64432.2, Monitoring and Compliance – Asbestos below, Parkway shall continue to monitor for asbestos at each source or entry point to the distribution system and one sample at a tap served by asbestos-cement pipe under conditions where asbestos contamination is most likely. Monitoring shall occur each nine-year compliance cycle.

“§64432.2. Monitoring and Compliance – Asbestos:

(a) All community and nontransient-noncommunity water systems are required to monitor to determine compliance with the MCL for asbestos in Table 64431-A during the year designated by the State Board of the first compliance period of each nine-year compliance cycle, beginning in

the compliance period starting January 1, 1993. The State Board will designate the year based on historical monitoring frequency and laboratory capacity.

(1) If a groundwater system is vulnerable to asbestos contamination solely in its source water, it shall collect one sample at every entry point to the distribution system which is representative of each water source after treatment and proceed in accordance with Subsections 64432(c)(2) through (e) and Subsections 64432(g) through (l).

(2) All approved surface water systems shall be designated vulnerable to asbestos contamination in their source waters. If a surface water system is vulnerable solely in its source water, it shall proceed as in paragraph (1) above.

(3) If a system is vulnerable to asbestos contamination due to leaching of asbestos-cement pipe, with or without vulnerability to asbestos contamination in its source water, it shall take one sample at a tap served by asbestos-cement pipe under conditions where asbestos contamination is most likely to occur."

Secondary Drinking Water Standards

Table 53 - Secondary Standards Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Comments
Auberry Well	Triennially	8/14/2018	2021	Manganese ¹ = 180 ug/L
Briggs Well	Triennially	8/8/2018	2021	
Countryside Well 01	Triennially	8/14/2018	2021	Manganese ¹ = 200 ug/L
Countryside Well 02	Triennially	8/14/2018	2021	Manganese ¹ = 180 ug/L
Elsie Avenue Well	Every Nine Years	7/20/2015	2024	Standby Manganese = 124 ug/L Iron = 1020 ug/L
Gerber Drive Well	Triennially	8/9/2018	2021	Manganese ¹ = 280 ug/L Iron ¹ = 480 ug/L
Hemingway Well	Triennially	8/15/2018	2021	Manganese ¹ = 210 ug/L
Lippi Parkway Well	Triennially	8/14/2018	2021	
Park Site 01	Triennially	8/15/2018	2021	Manganese ¹ = 180 ug/L
Park Site 02	Triennially	8/15/2018	2021	Manganese ¹ = 170 ug/L
Power Inn Well	Triennially	8/14/2018	2021	Manganese ¹ = 170 ug/L
Rockhurst Well	Triennially	8/14/2018	2021	
Sky Parkway Well	Triennially	8/12/2020	2023	
Southgate Well	Triennially	8/14/2018	2021	
Stocker Well	Triennially	3/17/2020	2023	
Vintage Park 01	Triennially	8/14/2018	2021	

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Comments
Vintage Park 02	Triennially	8/9/2018	2021	Manganese ¹ = 99 ug/L
Vintage Park 03	Triennially	8/9/2018	2021	Manganese ¹ = 81 ug/L
Wilbur Way 02	Triennially	8/15/2018	2021	Manganese ¹ = 190 ug/L

Discussion and Appraisal: No chemicals sampled above, at, or trending near MCLs. All wells with iron and manganese above SMCL are treated, with the exception of Elise Avenue well which is permitted as standby. Manganese SMCL = 50 ug/L, Iron SMCL = 300 ug/L.

¹Iron and manganese monitored weekly at the raw water blended sample point.

Nitrates/Nitrites

Table 54 - Nitrate Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Comments
Auberry Well	Annually	8/17/2020	2021	
Briggs Well	Annually	8/5/2020	2021	
Countryside Well 01	Annually	8/17/2020	2021	
Countryside Well 02	Annually	8/17/2020	2021	
Elsie Avenue Well	Every Nine Years	5/1/2018	2027	Standby
Gerber Drive Well	Annually	8/12/2020	2021	
Hemingway Well	Annually	8/12/2020	2021	
Lippi Parkway Well	Annually	11/16/2020	2021	
Park Site 01	Annually	8/12/2020	2021	
Park Site 02	Annually	8/12/2020	2021	
Power Inn Well	Annually	8/13/2019	Prior to returning to service	
Rockhurst Well	Annually	8/5/2020	2021	
Sky Parkway Well	Annually	5/11/2021	2022	
Southgate Well	Annually	8/12/2020	2021	
Stocker Well	Annually	8/12/2020	2021	
Vintage Park 01	Annually	8/10/2020	2021	
Vintage Park 02	Annually	8/10/2020	2021	
Vintage Park 03	Annually	8/10/2020	2021	
Wilbur Way 02	Annually	8/12/2020	2021	

Table 55 - Nitrite Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Comments
Auberry Well	Triennially	8/14/2018	2021	
Briggs Well	Triennially	8/8/2018	2021	
Countryside Well 01	Triennially	8/14/2018	2021	
Countryside Well 02	Triennially	8/14/2018	2021	
Elsie Avenue Well	Every Nine Years	5/1/2018	2027	Standby
Gerber Drive Well	Triennially	8/9/2018	2021	
Hemingway Well	Triennially	8/15/2018	2021	
Lippi Parkway Well	Triennially	8/14/2018	2021	
Park Site 01	Triennially	8/15/2018	2021	
Park Site 02	Triennially	8/15/2018	2021	
Power Inn Well	Triennially	8/14/2018	2021	
Rockhurst Well	Triennially	8/14/2018	2021	
Sky Parkway Well	Triennially	8/12/2020	2023	
Southgate Well	Triennially	8/14/2018	2021	
Stocker Well	Triennially	8/12/2020	2023	
Vintage Park 01	Triennially	8/14/2018	2021	
Vintage Park 02	Triennially	8/9/2018	2021	
Vintage Park 03	Triennially	8/9/2018	2021	
Wilbur Way 02	Triennially	8/15/2018	2021	

Discussion and Appraisal: No chemicals sampled in 2020 above, at, or trending near MCLs. Due to nitrate being less than 50% of the MCL, Parkway may continue to monitor annually.

Volatile Organic Chemicals (VOC)

Table 56 - VOC's Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Comments
Auberry Well	Triennially*	8/17/2020	2023	*Annual monitoring required for detected constituents: Toluene (3/21/2013) = 1.5 ug/L (MCL = 150 ug/L)
Briggs Well	Triennially	8/5/2020	2023	
Countryside Well 01	Triennially	8/17/2020	2023	
Countryside Well 02	Triennially	8/17/2020	2023	
Elsie Avenue Well	Every Nine Years	12/18/2017	2026	Standby
Gerber Drive Well	Triennially	8/12/2020	2023	
Hemingway Well	Triennially*	8/12/2020	2023	*Annual monitoring required for detected constituents: Tetrachloroethylene (11/29/2006) = 0.5 ug/L (MCL = 5 ug/L) Trichloroethylene (9/12/2007) = 0.6 ug/L (MCL = 5 ug/L)
Lippi Parkway Well	Triennially	11/16/2020	2023	
Park Site 01	Triennially	8/12/2020	2023	
Park Site 02	Triennially*	8/15/2018	2021	*Annual monitoring required for detected constituents: Xylenes (total) (9/21/2005) = 0.6 ug/L (MCL = 1750 ug/L)
Power Inn Well	Triennially	8/14/2018	2021	
Rockhurst Well	Triennially	8/5/2020	2023	
Sky Parkway Well	Triennially*	5/11/2021	2024	*Annual monitoring required for detected constituents: Tetrachloroethylene ¹ (5/11/2021) = 1.9 ug/L (MCL = 5 ug/L) Styrene (8/20/2003) = 1.3 ug/L (MCL = 100 ug/L) 112-trichloroethane (9/9/2008) = 0.6 ug/L (MCL = 5 ug/L) Trichlorofluoromethane freon 11 (10/10/2020) = 6.3 ug/L (MCL = 150 ug/L)

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Comments
Southgate Well	Triennially*	8/12/2020	2023	*Annual monitoring required for detected constituents: 13-dichloropropene (TOTAL) (6/7/2005) = 2.1 ug/L (MCL = 0.5 ug/L) Ethyl benzene (6/19/2007) = 76 ug/L (MCL = 300 ug/L) Styrene (6/19/2007) = 4 ug/L (MCL = 100 ug/L) Xylenes (total) (6/19/2007) = 436.6 ug/L (MCL = 1750 ug/L)
Stocker Well	Triennially	8/12/2020	2023	
Vintage Park 01	Triennially	8/10/2020	2023	
Vintage Park 02	Triennially	8/10/2020	2023	
Vintage Park 03	Triennially	8/10/2020	2023	
Wilbur Way 02	Triennially	8/12/2020	2023	

Discussion and Appraisal: No chemicals sampled above, at, or trending near MCLs. Sky Parkway Well water is treated with GAC to remove PCE.

Monitoring is required triennially if no detections of a VOC in accordance with §64445.1 (b)(1) below. Monitoring is required at a minimum annually when chemical is detected in accordance with §64445.1 (c)(4) below.

“§64445.1. Repeat Monitoring and Compliance – Organic Chemicals.

(b) When organic chemicals are not detected pursuant to table 64445.1-A.

(1) A water system which has not detected any of the VOCs on table 64444-A during the initial four quarters of monitoring, shall collect and analyze one sample annually. After a minimum of three years of annual sampling with no detection of a VOC in table 64444-A, a system using groundwater may reduce the monitoring frequency to one sample during each compliance period.

(c) When organic chemicals are detected pursuant to table 64445.1-A.

(4) If the detected level of organic chemicals for any sampling site does not exceed any shown in table 64444-A, the water source shall be resampled every three months and the samples analyzed for the detected chemicals. After one year of sampling an approved surface water system or two quarters of sampling a groundwater system, the State Board will consider allowing the water supplier to reduce the sampling to once per year upon request, based on a review of previous sampling data. Systems shall monitor during the quarter(s) which previously yielded the highest analytical results.”

¹Monthly monitoring in accordance with Sky Parkway 2020 operations and maintenance plan.

Synthetic Organic Chemicals (SOC)

Table 57 - SOC's Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Comments
Auberry Well	Two quarters in a year, every three years	5/10/2021	2021	
Briggs Well	Two quarters in a year, every three years	5/10/2021	2021	
Countryside Well 01	Two quarters in a year, every three years	5/10/2021	2021	
Countryside Well 02	Two quarters in a year, every three years	5/10/2021	2021	
Elsie Avenue Well	Every Nine Years	5/1/2018	2027	Standby
Gerber Drive Well	Two quarters in a year, every three years	5/12/2021	2021	
Hemingway Well	Two quarters in a year, every three years	5/12/2021	2021	
Lippi Parkway Well	Two quarters in a year, every three years	5/10/2021	2021	
Park Site 01	Two quarters in a year, every three years	12/16/2020	2021	1,2,3-TCP dated 11/5/2018
Park Site 02	Two quarters in a year, every three years	5/10/2021	2021	
Power Inn Well	Two quarters in a year, every three years	8/14/2018	2021	
Rockhurst Well	Two quarters in a year, every three years	5/10/2021	2021	
Sky Parkway Well	Two quarters in a year, every three years	5/5/2020 and 8/12/2020	2023	
Southgate Well	Two quarters in a year, every three years	5/12/2021	2021	
Stocker Well	Two quarters in a year, every three years	6/29/2020 and 8/12/2020	2023	
Vintage Park 01	Two quarters in a year, every three years	5/11/2021	2021	2378-TCDD (dioxin) dated 8/14/2018
Vintage Park 02	Two quarters in a year, every three years	5/11/2021	2021	2378-TCDD (dioxin) dated 10/8/2018
Vintage Park 03	Two quarters in a year, every three years	5/11/2021	2021	
Wilbur Way 02	Two quarters in a year, every three years	5/12/2021	2021	

Discussion and Appraisal: No chemicals sampled above, at, or trending near MCLs. Two quarters in a year is required, every three years for each source for systems serving over 3,300 persons.

Radiological

Table 58 – Gross Alpha Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Comments
Auberry Well	Every Nine Years	2/8/2021	2030	GA = 2.7 pCi/L GA CE = 0.93 pCi/L
Briggs Well	Every Nine Years	2/10/2021	2030	GA = 1.09 pCi/L GA CE = 1.15 pCi/L
Countryside Well 01	Every Nine Years	2/8/2021	2030	GA = 2.74 pCi/L GA CE = 0.93 pCi/L
Countryside Well 02	Every Nine Years	2/8/2021	2030	GA = 0.93 pCi/L GA CE = 0.91 pCi/L
Elsie Avenue Well	Every Nine Years	6/28/2012	2021	GA = 0 pCi/L GA CE = 0.16 pCi/L
Gerber Drive Well	Every Nine Years	2/10/2021	2030	GA = 1.49 pCi/L GA CE = 1.25 pCi/L
Hemingway Well	Every Nine Years	2/10/2021	2030	GA = 1.14 pCi/L GA CE = 0.81 pCi/L
Lippi Parkway Well	Every Three Years	3/12/2019	2022	GA = 7.55 pCi/L GA CE = 0.454 pCi/L UR = 11 pCi/L
Park Site 01	Every Nine Years	9/21/2017	2026	GA = 0 pCi/L GA CE = 0.19 pCi/L
Park Site 02	Every Nine Years	2/10/2021	2030	GA = 0.96 pCi/L GA CE = 0.82 pCi/L
Power Inn Well	Every Nine Years	3/6/2012	2021	GA = 0 pCi/L GA CE = 0.11 pCi/L
Rockhurst Well	Every Nine Years	2/10/2021	2030	GA = 1.94 pCi/L GA CE = 0.91 pCi/L
Sky Parkway Well	Every Six Years	12/10/2020	2026	GA = 2.47 pCi/L GA CE = 1.01 pCi/L UR = 2.9 pCi/L
Southgate Well	Every Six Years	1/23/2018	2024	GA = 4.53 pCi/L GA CE = .365 pCi/L
Stocker Well	Every Nine Years	2/10/2021	2030	GA = 2.47 pCi/L GA CE = 1.2 pCi/L
Vintage Park 01	Every Nine Years	2/10/2021	2030	GA = 1.35 pCi/L GA CE = 0.91 pCi/L

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Comments
Vintage Park 02	Every Six Years	2/10/2021	2027	GA = 3.75 pCi/L GA CE = 1.06 pCi/L
Vintage Park 03	Every Nine Years	8/12/2014	2023	GA = 0 pCi/L GA CE = 0.11 pCi/L
Wilbur Way 02	Every Six Years	2/10/2021	2027	GA = 3.48 pCi/L GA CE = 1.2 pCi/L

GA = gross alpha

GA CE = gross alpha counting error

UR = uranium.

Discussion and Appraisal: Frequency and the radiological chemicals required to be monitored are determined based on Article 5. Radioactivity §64442. MCLs and Monitoring listed below. Gross alpha (minus uranium/radium) MCL = 15 pCi/L. Uranium MCL = 20 pCi/L.

"Article 5. Radioactivity §64442. MCLs and Monitoring - Gross Alpha Particle Activity, Radium-226, Radium-228, and Uranium

(f) A gross alpha particle activity measurement may be substituted for other measurements by adding the 95% confidence interval (1.65σ , where σ is the standard deviation of the net counting rate of the sample) to it; and if,

(1) For uranium and radium measurements (after initial radium-228 monitoring has been completed), the gross alpha measurement does not exceed 5-pCi/L; or

(2) For radium measurements (after initial radium-228 monitoring has been completed), the result obtained from subtracting the uranium measurement from the gross alpha measurement does not exceed 5-pCi/L."

In addition, radiological monitoring should occur per the following frequency:

"(d) After initial monitoring, each system shall monitor for each radionuclide at each sampling site at a frequency determined by the monitoring result(s) [single sample result or average of sample results if more than one sample collected] from the most recent compliance period as follows:

(4) If the single sample result or average is:

A. Below the DLR, the system shall collect and analyze at least one sample every nine years (3 compliance periods).

B. At or above the DLR, but at or below $\frac{1}{2}$ the MCL, the system shall collect and analyze at least one sample every six years.

C. Above $\frac{1}{2}$ the MCL, but not above the MCL, the system shall collect and analyze at least one sample every three years."

PFAS

Table 59 - PFAs Monitoring Summary

Source	Frequency	Last Monitoring Date	Next Monitoring Date	Comments
Auberry Well	---	---	---	---
Briggs Well	---	---	---	---
Countryside Well 01	---	---	---	---
Countryside Well 02	---	---	---	---
Elsie Avenue Well	---	---	---	---
Gerber Drive Well	---	---	---	---
Hemingway Well	---	---	---	---
Lippi Parkway Well	Quarterly	2/16/2021	2 nd Qtr. 2021	PFOA = 3.2 ng/L PFOS = <2.0 ng/L PFBS = 2.9 ng/L
Park Site 01	---	---	---	---
Park Site 02	---	---	---	---
Power Inn Well	---	---	---	---
Rockhurst Well	---	---	---	---
Sky Parkway Well	Quarterly	2/16/2021	2 nd Qtr. 2021	PFOA = 6.4 ng/L PFOS = 21.8 ng/L PFBS = <2.0 ng/L
Southgate Well	Quarterly	2/16/2021	2 nd Qtr. 2021	PFOA = 2.7 ng/L PFOS = 9.7 ng/L PFBS = <2.0 ng/L
Stocker Well	---	---	---	---
Vintage Park 01	Quarterly	2/16/2021	2 nd Qtr. 2021	PFOA = 7.2 ng/L PFOS = 2.7 ng/L PFBS = 2.0 ng/L
Vintage Park 02	---	---	---	---
Vintage Park 03	Quarterly	2/16/2021	2 nd Qtr. 2021	PFOA = <2.0 ng/L PFOS = <2.0 ng/L PFBS = <2.0 ng/L
Wilbur Way 02	---	---	---	---

Discussion and Appraisal: PFAS monitoring includes 18 chemicals: PFBS, PFNA, PFDA, PFTA, HFPO-DA, ADONA, PFHpA, PFDoA, PFTrDA, PFOS, PFHxS, PFHxA, PFUnA, PFOA, N-ETHYL PERFLUOROOCTANESULFONAMIDOACETIC ACID, 9-CHLOROHEXADEC AFLUORO-3-OXANONE-1-SULFONIC ACID, N-METHYL PERFLUOROOCTANESULFONAMIDOACETIC ACID, 11-CHLOROECOSAFLUORO-3-OXAUNDECANE-1-SULFONIC ACID

On March 2019, the Division of Drinking Water issued Health and Safety Code 116400 Orders to 600 water system sites.

In addition the Division of Drinking Water issued a general order (DW2020-0003-DDW) dated September 4, 2020, for additional PFAs monitoring. Monitoring is required beginning 4th Qtr. 2020 and continuing quarterly until further notice. Lippi Parkway, Sky Parkway, Southgate, Vintage Park 01, and Vintage Park 03 require quarterly monitoring. PFOA notification level = 5.1 ppt, response level 10 ppt. PFOS notification level = 6.5 ppt, response level = 40 ppt. PFBS notification level = 0.5 ppb, response level = 5 ppb.

3. DISINFECTION BYPRODUCTS RULE

California Code of Regulations, Title 22, Chapter 15.5: Disinfectant Residuals, Disinfection Byproducts, and Disinfection Byproducts Precursors

a. Stage 2 D/DBP Rule

Table 60 - DBPs Monitoring Summary

TTHM (ug/L)	2020 1 st Qtr	2020 2 nd Qtr	2020 3 rd Qtr	2020 4 th Qtr	2021 1 st Qtr	LRAA
Site 1 - 7558 Whisperwillow Dr	<1.0	3.8	<1.0	<1.0	4.3	2
Site 2 - 7000 Chandler Dr	<1.0	6.9	<1.0	<1.0	24.3	8
Site 3 - 7532 Persimmon Ave	<1.0	47.7	36.7	22.7	30.6	34
Site 4 - 7040 Carthy Way	<1.0	<1.0	1.3	<1.0	26.8	7

HAA5 (ug/L)	2020 1 st Qtr	2020 2 nd Qtr	2020 3 rd Qtr	2020 4 th Qtr	2021 1 st Qtr	LRAA
Site 1 - 7558 Whisperwillow Dr	<1.0	<1.0	<1.0	<1.0	4.2	1
Site 2 - 7000 Chandler Dr	<1.0	1.3	<1.0	<1.0	18.3	5
Site 3 - 7532 Persimmon Ave	<1.0	30.1	28.0	11.9	25.4	24
Site 4 - 7040 Carthy Way	<1.0	<1.0	<1.0	<1.0	22.0	6

4. LEAD AND COPPER RULE

California Code of Regulations, Title 22, Chapter 17.5: Lead and Copper

Program Description: California-American Water Company – Parkway water system collects distribution system lead and copper samples pursuant to California Code of Regulations, Title 22, Division 4, Chapter 17.5. Historic summary of all lead and copper monitoring is tabulated in Table 39.

Number of samples required: 30

Number of samples taken: 30

90th Percentile Copper Action Level: 1.3 mg/L (1,300 ppb) (Section 64675.5 (a) (1))

90th Percentile Lead Action Level: 0.015 mg/L (15 ppb) (Section 64675.5 (a) (1))

Table 61 – Historic Lead and Copper Monitoring Summary

Round	Date	No. Samples Required / Collected	90% Lead (ppm)	90% Copper (ppm)
1	2/5/1993	60 / 78	<0.005	0.150
2	8/3/1993	60 / 63	<0.005	0.140
3	7/21/1994	30 / 33	<0.005	0.120
4	7/28/1998	30 / 30	<0.005	0.078
5	9/30/2001	30 / 30	<0.005	0.600
6	10/7/2004	30 / 34	<0.005	0.052
7	9/19/2007	30 / 30	<0.005	0.094
8	9/14/2010	30 / 33	<0.005	0.100
9	8/23/2013	30 / 32	<0.005	0.118
10	9/9/2016	30 / 30	<0.005	0.157
11	6/20/2019	30 / 30	<0.005	0.113

Discussion and Appraisal: The next round of monitoring is due June - September 2022.

5. CONSUMER CONFIDENCE REPORT

California Code of Regulations, Title 22, Chapter 15, Article 20: Consumer Confidence Report

Send Date/Anticipated Send Date: May 19, 2021

Certification Form received: by October 1, 2021

Copy received by the Division: ☒ Yes ☐ No ☐ Unknown

Discussion and Appraisal: CCR reporting was completed as required.

H. OPERATION AND MAINTENANCE

1. CROSS-CONNECTION CONTROL PROGRAM

Program Description: California-American Water Company participates in the Sacramento County Backflow Prevention Program. The program is managed and operated by the Sacramento County Environmental Management Department.

Cross-connection control program coordinator: Oscar Garcia

Certification Number: AWWA 03236

Cross-connection control ordinance:

Ordinance Date: California-American Water Company has adopted the Sacramento County cross-connection control ordinance for Parkway water system.

Copy received by the Division: ☒ Yes ☐ No ☐ Unknown

Table 62 – Cross connection testing

Year	Total Devices	Air Gaps	Newly Installed	No. Tested	No. Failed	No. Repaired/ Replaced	Inactive
2018	905	0	47	882	43	52	0
2019	948	0	26	858	50	60	0
2020	967	0	35	838	5	5	19

Discussion and Appraisal: Reportedly, "Due to Covid 19, many businesses were closed and did not complete 2020 annual testing. Testing resumed early 2021".

2. CUSTOMER COMPLAINT PROGRAM

Program Description: California-American Water Company personnel investigate all complaints as they are reported. Responses to the complaints vary based on investigation findings. Summary of consumer complaints below

Table 63 - Summary of customer complaints

Type	Year		
	2018	2019	2020
Taste and Odor	6	5	13
Color	8	7	0
Turbidity	3	3	1
Worms and Other Visible Organisms	0	0	0
Pressure (High or Low)	0	0	0
Water Outages	0	0	0
Illness (Waterborne)	0	0	0
Other	9	0	11
Total	26	15	14

Discussion and Appraisal: California-American Water Company reports that service personnel are dispatched to investigate complaints.

3. EMERGENCY RESPONSE PROGRAM

a. Emergency Notification Plan (ENP):

Plan Date: February 22, 2019

Copy received by the Division: ☒ Yes ☐ No ☐ Unknown

b. Emergency Response Plan (ERP):

Plan Date: January 2017

Copy received by: ☒ Yes ☐ No ☐ Unknown

Discussion and Appraisal: The Water System's Emergency Notification and Emergency Response plan is up-to-date.

4. PROGRAM

California Code of Regulations, Title 22, Chapter 16, Article 4: Materials and Installation of Water Mains and Appurtenances

Program Description: The Water System has a valve-exercising program

Approximate number of valves: 5168

Total number of valves exercised in 2020: 666

Size Range of the valves: 4-inch to 24-inch

Valve exercising frequency: Reportedly, system operators exercise all valves every 5-7 years.

5. DISTRIBUTION SYSTEM FLUSHING PROGRAM

California Code of Regulations, Title 22, Chapter 16, Article 4: Materials and Installation of Water Mains and Appurtenances

Program Description: The Water System has a flushing program

Approximate number of dead ends: 365

Total number of valves exercised in 2020: 9

Percent with flushing valves: 100

Flushing frequency: Reportedly, Water System operators flush the distribution system as needed.

9. VULNERABILITY ASSESSMENT

Vulnerability Assessment

a. Fire:

Is Defensive Space of 100-feet (California Public Resources Code 4291) maintained around all structures owned, operated, and managed by the Community Water System? __X__ Yes __No

Discussion and Appraisal: California Public Resources Code 4291 applies to properties that are "upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material". Parkway staff is aware of defensible space requirements and facilities appeared to be maintained. Parkway reported no concern to Fire on the 2020 electronic water system annual report.

b. Flooding:

Has the water system had a history of flooding? __Yes X No

Are any of the drinking water facilities owned, operated, and managed by the Community Water System vulnerable to flooding? __Yes X No

Discussion and Appraisal: The Division records do not demonstrate any history of flooding. Facilities per the Department of Water Resources Best Available Flood Maps online tool are outside of 100 year flood risk areas. Parkway did not report concern to flooding on the 2020 electronic water system annual report.

c. Drought:

Has the water system had any history of drought related shortages and/or outages? __Yes X No

Is water system prepared for drought related shortages or outages? (Interties, backup supply, increased storage, etc.) X Yes __ No

Discussion and Appraisal: There are measures in place such as water conservation measures, drought contingencies, storage, and customer outreach measures relating to drought shortages. Parkway reported no concern to drought on the 2020 electronic water system annual report.

d. Backup Power

Is backup power available via portable generators or permanent generators? X Yes No N/A

Discussion and Appraisal: There is backup power available at some facilities.

Discussion and Appraisal: All generators are tested at least monthly.

I. OVERALL SYSTEM APPRAISAL

Permit is up to date and conditions are being followed. Valves and dead ends are exercised/flushed. Customer complaints are being addressed. Repairs to distribution system are being made, backflow devices are being tested. Source and distribution monitoring is in compliance. Operators meet certification requirements. Plans (BSSP, DBP, ENP) are up to date.

J. APPENDICES

Appendix A Compliance Inspection Findings

Appendix B Inspection Photos

Report Prepared By:

Bryan Rinde
Bryan Rinde, P.E.
Water Resources Control Engineer

July 26, 2021
Date

Appendix A - Compliance Inspection Findings

Public Water System Name: California American Water - Parkway

Public Water System Number: 3410017

Item No.	Description of Finding	Response Deadline
--	No deficiencies identified with California Code of Regulations Title 17 and Title 22 regulations.	--

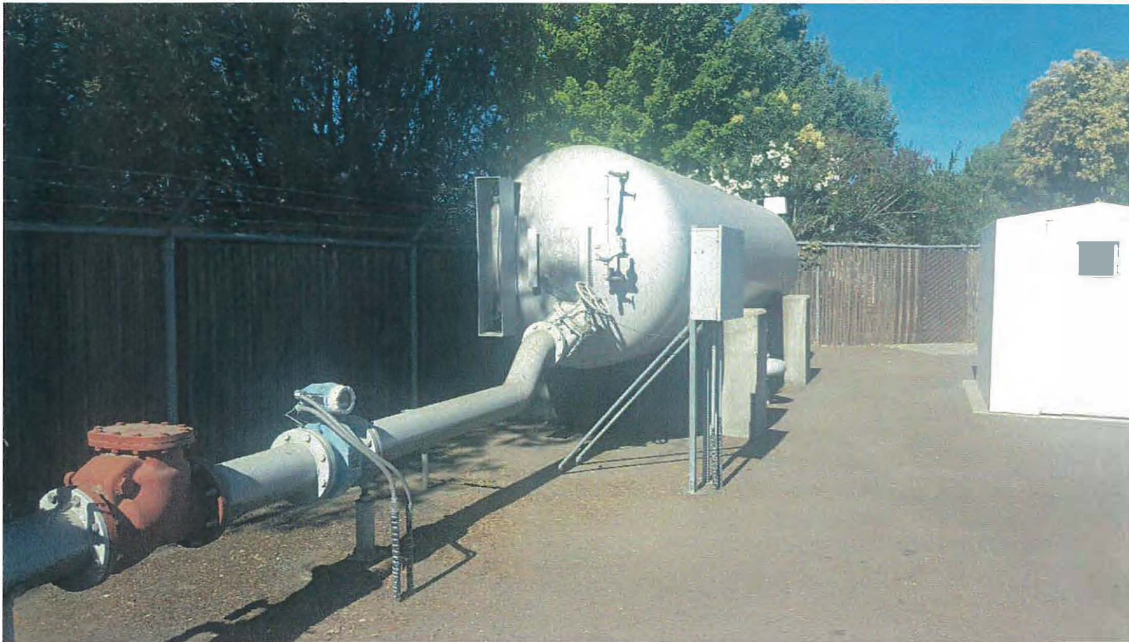
Appendix B – Inspection photos – 06/16/2021

Briggs Well



Elsie Avenue Well





Gerber Drive Well



Appendix B – Inspection photos – 06/16/2021

Lippi Parkway Well



Appendix B – Inspection photos – 06/16/2021

Parksite 01



Appendix B – Inspection photos – 06/16/2021

Rockhurst Well

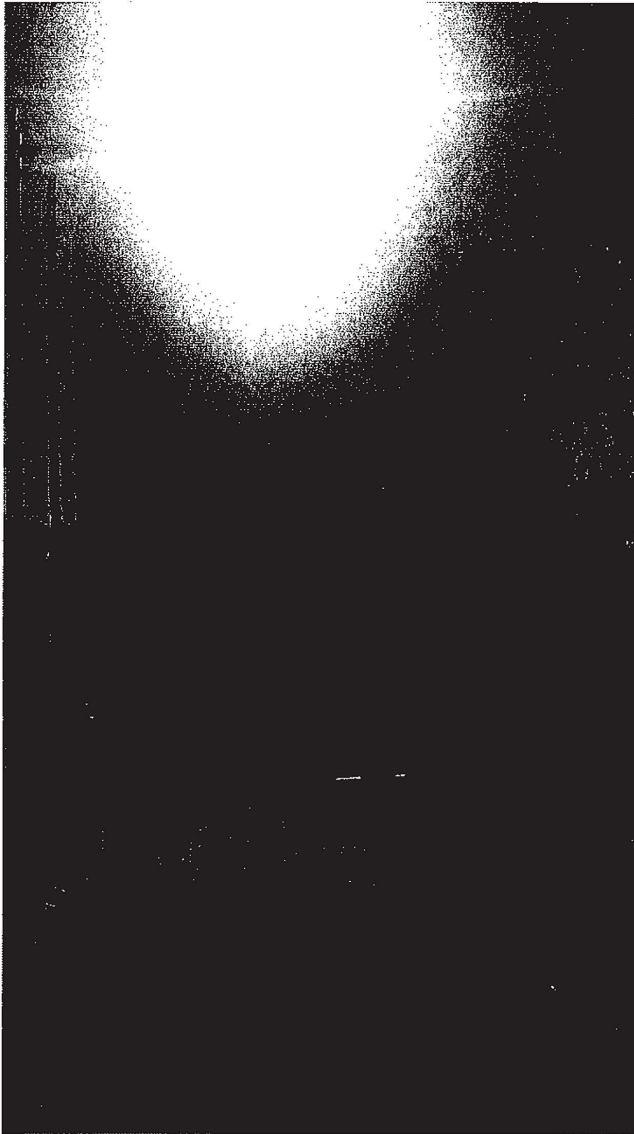


Appendix B – Inspection photos – 06/16/2021

Sky Parkway Well



Appendix B – Inspection photos – 06/16/2021





Southgate Well





Stocker Well

